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POCKET FARRIER.

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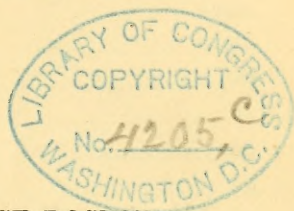
UNITED STATES OF AMERICA.

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STEPHENSON'S

POCKET FARRIER

OR,



EVERY ONE HIS OWN HORSE DOCTOR.

WRITTEN IN PLAIN LANGUAGE, TO ENABLE EVERY
MAN TO TREAT CORRECTLY AND WITH SUCCESS
ALL DISEASES TO WHICH HORSES
AND CATTLE ARE LIABLE.

10
BY JOHN STEPHENSON, V. S.

TECUMSEH, MICH.:
RECORD BOOK AND JOB PRINTING HOUSE.
1872.

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P R E F A C E .

To present a publication to the world, however small the size of that publication be, is a matter of vast importance, and what no one should dare to do without the most deliberate consideration. This should especially be the case, with respect to this work. The author has been solicited by his friends, for years, to write a **POCKET FARRIER**, describing the diseases of both cattle and horses—the symptoms of every disease, and what to give, the quantity to give at a dose; and also to give it in as few words as possible. With such a book at hand, the farmer or his neighbors, who may be more apt at doctoring horses, may determine the disease, and apply the proper treatment with success far superior to what would result without such a book.

I may add that the horse is often treated for the wrong disease amid this confusion of opinion, and not unfrequently loses his life by such treatment. Now in the absence of men educated as horse doctors, on whose judgment we may rely, is it not our only safe way of guarding against fatal mistakes, to have at hand a book, written in plain language, which explains carefully every symptom of every

disease, and points out especially those symptoms which distinguish each disease from every other for which it is liable to be mistaken ; and not only this, but one which tells what to give, the quantity to give at a dose, how to give it, what effect it will have, when to give more, and when to quit giving it ?

But has such a book yet been offered to the public ? I think not. I am aware of a few works that are occasionally met with, which have given the subject a full consideration ; but they are written in professional language, and, consequently, can not be understood by the general reader. Such are the works of Skeavington, White, Coleman, Youatt, Dodd, Mason, and others. It is well known they are not at all explanatory. Besides these, there are many small works on Farriery, generally in pamphlet form, and principally filled up with cures. These are usually written by farriers or shoeing smiths, who are a set of gentry that always have an extensive quantity of ignorance to display, as well as a great number of infallible receipts, which have been handed down to them from their forefathers, and are, in fact, considered a kind of extremely valuable property by these "kill or cure" practitioners. Whatever may be the merits of the cures they contain, they are so deficient in the explanation of the symptoms of the different diseases as not to be relied on. Certainly, if any are disposed to use their own cure, or that of the farrier, for any disease, the

first thing is to determine that the horse has that disease.

It has been the object of the writer of this book to express his ideas in as few words as possible—conceiving it to be a folly to drag his readers a journey of ten miles, when five would answer the same purpose. It frequently happens, both with writers and public speakers, that a subject, plain in itself, is obscured and made to wear a mysterious aspect, by a confusion of needless and useless words. This may be considered as a sure sign that the writer or speaker is in a mist himself; and no wonder that he should throw a mist before the eyes of others. The Author has not the vanity to think, however, that in every instance he has said no more than was necessary, but his readers must give him credit for having endeavored to say what he has said to the point. The volume, such as it is, he commits to the world. If any person is disposed to prepare himself for the doctoring of his own horses when diseased, he can have no better means of doing so, than by the careful study of this work. Division First treats of the diseases of the horse, giving a description of each particular disease, its nature, symptoms, mode of distinguishing, and treatment. The treatment given is the best known, and such as may be readily obtained. Also, the cow's sickness in calving, and all diseases to which she is liable, the symptoms of each disease, and its cure.

The Author of this book was well known in England, at the time of his three years pupilage, by a number of well-to-do farmers, who now live in Lenawee and Jackson Counties, Michigan. These farmers resided within three miles of the Author at the time of his pupilage, and were well acquainted with the gentleman he studied with, whose name was Robert Nickleson, M. D.

He would further remark that he has had over twenty years' extensive practice in both Lenawee and Jackson Counties, and would ask the reader to inquire of any parties whose horses or cattle he has treated, as to his professional character as a horse doctor or veterinary surgeon. Their testimony, one and all, will show that his success, in doctoring both horses and cattle, has been beyond all expectation : so much so that his friends have urged him, again and again, to write a book, in plain language, on the external and internal diseases of horses and cattle. It is believed that the work is now ready to be placed before the public, as perfect in all its parts as it is possible to get it in the present state of our knowledge of the nature and treatment of the diseases of the horse.

This little work contains receipts for diseases of horses and cattle, to the number of sixty or seventy, carefully selected from 500 recipes in the Author's possession. These receipts are written so as to be perfectly understood by any man of common education.

HINTS TO PURCHASERS OF HORSES.

To purchase a horse free from blemish and imperfection is, by experience, found to be a task more difficult and arduous than the whole art of horsemanship; and there is no kind of traffic wherein there are so many deceptions practiced as in the sale of horses. It may not be unserviceable, therefore, to put down a few directions on this subject.

In the first place, the horse being before you, take your station about three or four paces off, in a line with his breast; observe his countenance, that it is cheerful, sprightly, and free from heaviness and gloom; that the ears are thin, small, evenly set, and terminate in a point; for if they are thick, long, too closely set to each other and drooping, it is not only a great deformity, but such a horse will be dull, heavy and sleepy. The face should be lean and free from flesh, the forehead broad and rather swelling outward; a star or a blaze thereon is considered marks of beauty and courage; but if the forehead is flat, the face in general flat and cloudy, and baldness appear on the nose, they are deformities. If the eyes are round, black, shining, not too big, but rather protuberant, so that they move about their orbits with a quick, lively motion, and in doing so, little or none of the whites appear, they are good; but if, on the contrary, they look yellow cast, dull, moist and sunken, they are bad. The nostrils should not be so large as upon every little effort to occasion the muzzle to become wide, distended, and the inside redness to appear—that being a sure sign of a short wind and weakness. The muzzle of the nos-

trils should be small, and the inside free from moisture; the upper lip should not hang over the lower one, but both meet evenly together, and particularly observe that the horse is not shallow-mouthed. From the head look down to the chest; if it is broad prominent and muscular, it denotes beauty and strength, whereas the narrow chest is an evidence of deformity and weakness. The legs being set too close together will interfere with the motion of each other, and thereby greatly hinder speed, cause the horse to stumble, and sometimes to fall. The thighs should be fleshy, sinewy, and moderately outward swelling, so that upon any little strain or movement of the body, the muscles thereof may be clearly discerned, for they are signs of strength; the contrary, weakness. Particular care should be taken in examining the knees, that they are lean, sinewy, close-knit and evenly proportioned; but if they appear swelled, and feel soft, as if a quantity of wind had collected between the skin and the flesh, or if one knee appears larger than the other, or looks thin, bristly, the hair broken, etc., these are true marks of a stumbler, and such a horse ought to be rejected. In examining the pasterns, see that they are flat, lean, and free from every kind of scab, seam and swellings. They should be strong, straight, and rather short, for a long pastern shows weakness, and such a horse cannot perform a long journey without tiring.

Nothing is more essential to be observed in the purchasing of a horse, than the formation of the hoofs, which are the grand foundation of the whole mechanism of the animal; for if they are bad, superstructure, however finely proportioned, can not possibly be good. The hoofs should be smooth, tough, rather long, deep at the heel, and either black or dark brown; the former are the best proof against the effects of hard and bad roads. The white hoofs are tender and subject to foundering. The light brown ones are brittle, and consequently will not carry a shoe well. A round hoof proceeds from

contraction, and the flat ones show foundering. If the hair of the coronet, or top of the hoof lies smooth, close, and the flesh even therewith, it is perfect; but if the hair on that part looks thin and bristly, with little scales or scabs on the skin, and the flesh swelling over the hoof, I would advise you not to buy such a horse, as they are the forerunners of ringbones, crown scabs, quittor-bones, etc. Be careful, particularly, in examining the bottom of the feet; placing your thumb on the frog, compress it rather sharply, in order to discover any defect that may be there; that they are large, spreading, open, and sound. I believe I need not remind you that the spongy, running, and decayed frogs are to be rejected.

You are now to stand about three paces off, in a line with the horse's shoulder, and take a side view of him. The neck should be small, and rather short than long; and particularly observe that no swelling appears on the setting on of the head. The shoulders should lie rather backward, and come around with a good sweep, and rise well up to the withers. A horse low in the shoulders will be continually getting the saddle on his neck, unless a crupper is affixed to it. This, besides being very ungraceful, will cause him to stumble, and very probably to break down. The tail should stand rather high, flat, and bending a little inward, which, if the horse has a good buttock, it will do; but on a bad buttock, a hog or goose rump, a tail can not stand well. They are objectionable deformities.

You are now to take a view of the hind parts, standing at a convenient distance from the horse, that you may more advantageously see that the hips are broad, round, and even; also, that the hind legs are lean, flat, and sinewy. Be careful that they are not fat or swelled, and that one elbow of the hock is not larger than the other, that no seams or scars appear thereon, and that he is not bow-legged.

Various are the arts used by dealers to prevent

you from discovering the true age of a horse by his teeth. It is, therefore, useless to write a long dissertation upon that subject, as it would serve only to perplex my reader, rather than to enlighten his judgment. The shortest and most certain method to judge whether a horse is young or old, is this: Turn back both lips, and if the teeth are small, white, glossy, and fit evenly together, he is young; but if they are large, long, yellow, irregularly set, and the top row project over the bottom, the tusks yellow or of a blackish color, he is old.

Having finished your examination of the horse, see him walk and trot in hand, and let not the owner haul his head about, nor be too free with his whip; but see that he leads him carelessly by the extreme end of the halter or bridle, as by that means you will discover any defect that may possibly be in the joints, or if he be a stumbler.

The Stomach.

The horse's stomach is smaller than that of any other animal of his size. It will not contain half of the food which he eats at an ordinary meal. The value of a horse consists in his speed as well as in his strength. We require his services at all hours, whether full or fasting; and sometimes when journeying we are unable to allow him sufficient time for the grinding of his food, and none for its digestion. His stomach is placed close against the diaphragm — a muscular partition between the chest and belly—which by pressing upon the lungs, produces expiration, and by its contraction the chest is enlarged and inspiration is affected. If the stomach were large, this muscle would not be able to perform its office, the breathing would be laborious, and the animal in continual danger of suffocation. But it is an error to suppose that he can always work with safety and comfort on a full stomach. He excels other animals in this respect, but many a

horse is destroyed by being hurried after a plentiful meal. The structure of a horse's stomach is curious. One half of it is a mere store-room for the food. Sometimes he has not time to chew and prepare his food for digestion; and, as it were, puts it into this receptacle to be softened and made more easy of digestion afterwards. Subsequently it passes into the other part of the stomach, where the process of digestion is performed, though only in a partial degree. It must, however, be fully accomplished somewhere, or the animal could not obtain sufficient nourishment.

The Intestines.

The digestion of the horse's food is further carried on in the duodenum, which is the first portion of the intestines. This organ is larger in the horse than in almost any other animal. The process next proceeds in the small intestines, which are often sixty-six feet in length; and is further perfected by passing through the larger intestines. The first of these, the colon, is of an enormous size, and usually will contain twelve gallons of fluid. Here is a remarkable contrivance for the retention and more perfect digestion of the food. The colon is puckered into numerous deep cells, through all of which the food passes, and in which it is for a while detained. The cæcum, commonly called the blind gut, lies at the end of the large intestines, into which the more fluid part of the food is sent. Its still more complicated construction of cells is evidently designed for the same purpose. When the food has at length reached the last intestines, called the rectum, very little undigested food will be found to remain.

The Liver.

Two fluids enter the duodenum by small orifices, in order to contribute to the process of digestion.

The bile comes directly from the liver, for the horse has no gall bladder. His stomach being small, must therefore, be oftener replenished, and the food must be oftener passing out of it, and there can be no necessity for the gall being kept in a reservoir for use at a distant day.

Lung Fever.

This disease is known by the names of Lung Fever, Inflammation of the Lungs, and Pneumonia. It is an inflammation of the substance of the lungs, or lights, as butchers call them. It may affect either the right or left lung, or both of them. This complaint is generally preceded by a shivering; the animal appears dull, and droops his head, and the legs and ears are extremely cold. As the disease advances, the breathing becomes quick and difficult, accompanied by heaving and working of the flanks. The mouth feels hot, and the animal is obliged to suppress the cough on account of the soreness of his lungs. He refuses all food and rarely attempts to lie down. The horse appears moping and disinclined to move; may hang his head under or rest it on the manger. As yet, the true nature of the case may not be suspected, the horse being supposed to be only a little ailing; but the second stage of the disease follows, and more marked symptoms make their appearance—the pulse increasing in frequency. This is the first stage of the disease, as far as I have gone. In the second stage of the disease, the pulse appears irregular and almost imperceptible. This marks the beginning of the third stage, in which the blood is overloaded with poisonous matter, which the lungs have lost power to remove.

Immediately on ascertaining that a horse is attacked by an inflammation of the lungs, four quarts of blood, at least, should be taken at once, and if the animal be in high condition, or the difficulty in breathing require, this quantity may be increased to

six quarts. A clyster should next be given, composed of four ounces of Epsom salts, in thin gruel, and repeated every three hours, until the bowels are freely opened. If you have not got the salts, use five table spoonfulls of common salt, dissolved in the gruel above mentioned. After this the following pill must be given: Emetic Tartar, one drachm; Asafoetida, one drachm; Ginger, $\frac{1}{2}$ ounce. Dissolve in soft soap, say a tablespoonful, dissolve and make into a pill, and give it by pulling out the tongue with the left hand, and with the right take the pill and give. It must not be supposed that because human doctors often give their lung fever patients physic, that the same may be done with the horse suffering from this disease. If the horse's bowels are costive, and it is thought necessary to move them, an injection is all that would be safe to use. A gallon of warm soap suds may be used as an injection. An active physic would be equal to a sentence of death.

Pleurisy.

The Pleurisy may be produced by the same causes as the Inflammation of the Lungs. Indeed, inflammatory disorders are always brought on by a sudden suppression of the perspiration. In inflammation of the pleura, or membrane which lies in the chest, and is hence called Pleurisy, the symptoms vary so little from inflammation of the lungs, that it is difficult to distinguish between them. Question: What is the difference in the actions of a horse between inflammation of the lungs and the Pleurisy? In the Pleurisy the horse shows great uneasiness, and is continually shifting about. He often strives to lie down, but immediately starts up again, and turns his head to the affected side; whereas in inflammation of the lungs the horse is more tranquil, and never attempts to lie down. In Pleurisy a horse's mouth is generally parched and dry, but in

peripneumony, or inflamed lungs, when opened, a roapy slime generally runs out in great abundance, besides a discharge from the nose, much in the same way as in a malignant fever, and a red or yellow serum, or coagulable lymph, will adhere to the inside of the nostrils. In the Pleurisy, a horse works violently at the flanks, is very restless, and his belly generally tucked up; but in peripneumony he always shows fullness, and the working of the flanks is regular, except after drinking, or when he is agitated and disturbed by giving him medicine, in which case the heaving becomes stronger and more vehement than at other times; his ears and feet are for the most part always cold, and he often falls into damp sweats, with other symptoms common in malignant diseases, except that they come more suddenly and with greater violence.

An inflammatory attack has often been mistaken for the gripes; but the difference is easily perceptible, since when a horse is griped he lies down and rolls about, and sometimes, when violently attacked, his eyes are turned up and his limbs stretched out as if dying; cold, clammy sweats appear, and he frequently stales and dungs, but with great pain and difficulty, until some relief be procured.

The cure of a Pleurisy and an Inflammation of the Lungs is the same, except where accidentally symptoms occur to require a variation. Copious bleeding is particularly necessary. Give the same medicine you did for Lung Fever, or give this:

Tartar Emetic, 60 grains; Sweet Spirits of Nitre, one ounce; Tincture of Digitalis, one ounce; warm water, one pint. Mix and give as a drench all at once. Take White Liniment and rub on the chest and breast. The cold legs should be rubbed with powdered Cayenne pepper, one ounce in a pint of vinegar.

The symptoms of this disease and lung fever are very nearly the same. Indeed, the two diseases may both affect the horse at once, commencing at the same time, or one commencing and then the other

coming on afterwards. Such a case is called pleuropneumonia. Pleurisy is an inflammation of the pleura, or thin, glistening membrane which covers the substance of the lungs, being so intimately connected with the substance of the lungs, such as covering it all over, and the cavity of the chest, it has been thought to be of itself a disease in the horse. The pleura of the horse is seldom or never the situation of the disease. If the pleura should be diseased, it is in connection with the substance of the lungs. Whenever the blood is prevented from circulating freely through the lung, it is so important an organ that it becomes the origin of several diseases. The pulse of a horse in Lung Fever differs from that in Pleurisy. As the blood is not obstructed in its passage through the lungs as it is in Lung Fever, we have not the small, oppressed pulse of that disease, but a hard, full pulse, surely indicating inflammation. The feet and legs are cold, but not so cold as in Lung Fever. The membrane of the nose is somewhat red, but not so intensely red as when the lungs are the seat of inflammation

The Colic.

The Colic is sometimes occasioned by perspiration being suddenly checked, from imprudent exposure to wet or cold, or drinking a large quantity of cold water when the body is heated by exercise; or it may be produced by eating too much immediately after fatigue, or by bad hay, new corn, or whatever is new or prone to fomentation; and sometimes it may originate in weak and delicate animals, from the formation and confinement of air in the intestines.

This disease is generally manifested by the horse suddenly lying down and rising again, and sometimes striking his belly with the hind feet; he stamps with his fore feet, and refuses every kind of food. When the gripes are violent, he throws up his body in convulsive motions, his eyes are turned up, and

his limbs stretched out as if dying ; he falls into profuse sweats, succeeded by cold shivering fits ; tries to stale ; turns his head frequently towards his flanks ; rolls over, and often turns on his back. When the pulse becomes small and feeble, the horse frequently lying on his back and voiding small portions of dung like gingerbread nuts, his backbone elevated, and his legs and ears cold, it is a certain indication that inflammation has taken place. When mortification advances, the animal appears easier and free from pain, which is a sure prelude to death.

In all cases of the colic, clysters should be administered with as little delay as possible, and repeated every half hour until the disorder be removed or considerably relieved. Previous to introducing the clyster pipe, the hardened dung in the rectum should be cleared away. Give a clyster composed of thin gruel, 4 quarts, epsom salts, 4 ounces. Repeat this every half hour, and if the symptoms do not abate give the following ball or pill : Opium $\frac{1}{2}$ drachm, asafetida 1 drachm ; to be made into a pill with ginger and soft soap. If you have not got the opium give one ounce of laudanum, a tablespoonful of ground pepper, spirits of turpentine one ounce ; mix it in $\frac{1}{2}$ pint of water, (six ounces of whisky is better.) I have found great benefit in the last remedy. If the clysters should not have desired effect, take a large onion, peel and quarter it and pass it up the rectum, which will speedily stimulate it into action.

When a horse is taken sick the pulse is the first thing I notice, which in spasmodic Colic, seldom becomes altered from its natural state, unless the Colic has existed some considerable time, when marks of general irritation sometimes present themselves ; the pulse being somewhat hardened and quickened sometimes when the paroxysms are on. A slight alteration may be then felt, as in the earlier stages should the pain be great, but slight alteration occur and cease on the pain going off.

I have been very particular in describing the symptoms, in order that mistakes may be avoided, for, if the horse be under the immediate influence of existing spasm, it will in some instances present a full bounding pulse, but oftener a wiry though quickened beat; both may be taken for inflammation. The legs in Colic are but seldom affected, and never remain cold long at any one time. But the coat stares and the horse breaks out frequently into cold sweats. He frequently attempts to stale without effect; at other times he stales frequently. Generally the horse is costive, a few of the balls, very dry, being forced from him during the spasmodic fits.

For the cure of Spasmodic Colic, or Gripes, as called by some, I would recommend bleeding, and more or less liberally according to its violence, or having continued several hours without mitigation. Extensive bleeding, be it remembered, is one of the most powerful relaxers of spasms. In every such case bleed liberally, say at least six quarts, which, if the horse be in anything like moderate condition cannot do harm. I have known horses bled in the mouth for Gripes, but never saw any good from it. To bleed from the jugular vein the most proper place for making the opening is where the integument is thinnest, which is about a hand's breadth from the head, just below the branching off of the vein to the lower jaw, and which may be distinctly seen when any pressure is made on the main branches of the vein. In performing the operation with a fleam the operator should hold the fleam between the forefinger and thumb of the left hand. With the second finger he is to make a slight pressure on the vein, and before it becomes too turgid or full, make the opening. The same degree of pressure is to be continued on the vein till the quantity of blood to be taken away is received into a proper measure, when you can ascertain the quality as well as the quantity, of blood. Some persons tie a ligature around the neck previous to bleeding from the jugular vein. It is

to be observed that it stops the circulation in both veins at the same time, hence they become turgid and full of blood, insomuch that they feel under the finger like a tight cord, and as the parts adjoining are loose and soft, when the stroke is given to the fleam, the vein, by its hardness and tightness, slips to one side, and of course eludes the stroke; hence, a deep wound is made by the fleam to no purpose, and this is sometimes frequently repeated. Unskillful people likewise have a custom of waving or shaking the blood-stick before they strike the fleam, in view of the horse, whose eye is fixed on that instrument, and when they intend to give the stroke they make a great exertion, and the horse being alarmed by the motion, raises his head and neck, and disappointment follows. The struggle that ensues from that circumstance prolongs the operation; the ligature at the same time being continued around the neck, a total stagnation of blood in the vessels of the head takes place. Therefore, a ligature ought never to be used, as a moderate pressure of the finger below the orifice will always be sufficient to make the blood run easily; but if the horse is lying on the ground, then a ligature may be necessary. In pinning up the orifice, some have a custom of raising or drawing out the skin too far from the vein; hence, the blood flows from the orifice in the vein into the cellular membrane between it and the skin, which causes a large swelling to take place immediately.

Bleeding is sometimes the quickest method of giving relief in the beginning of inflammatory fevers, to which horses are very liable; as in all violent acute pains, such as the gripes or colic, strangury or suppression of urine; in rheumatic complaints, where the pain causes stiffness or lameness, and which frequently shifts from one limb to another, or where it affects the neck and occasions that stiffness and contraction of the muscles which is commonly called the chords; in inflammation of the eyes, or in the swellings of the glands about the

throat, jaws, etc.; in inflammation of the liver, the lungs, the pleura, stomach, intestines, kidneys, bladder, or any of the internal viscera; in apoplexy, vertigo or giddiness, and in all disorders where the head seems to be affected; in eruptions of the skin, called surfeit; in full habits of the body, where proper exercise has been neglected, and when a horse breathes with difficulty on the least exertion. In all these cases bleed.

On the other hand, bleeding is to be avoided in all cases of inflammatory swellings after matter is formed; and it is also to be avoided in all cases of weakness or lowness produced by fatigue or disease, or after strong evacuations by purging or scouring, or diabetes, or excessive staling. Bleeding is also improper during the time of horse moulting, or shedding his coat; in fact, it should never be practiced unless some more substantial reason can be given than the mere plea of custom at certain times of the year.

Diarrhea.

This disorder may proceed from a defective perspiration, from an increased secretion of bile, from too violent exertion, from hard riding, over feeding, or eating unwholesome food, and sometimes from a morbid change in the secretions of the stomach and intestines. It may also proceed from drinking cold water when heated by exercise, and occasionally from worms. Sometimes it is the critical termination of a disease, in which case it proves salutary, and should not be suddenly checked.

Diarrhea, though not very common, will sometimes occur. It is indicated by a constant and copious discharge of dung, accompanied with pain, restlessness, and loss of appetite. As the disorder increases, the discharge is chiefly mucous, or mixed with small, hard lumps of dung covered with a greasy matter. When this has been neglected, and

evacuations become involuntary, attended with coldness of the extremities, a fatal termination will generally ensue. This disease is most prevalent in the winter, or cold weather.

Both astringents and violent purgatives are improper in this disease. Such medicines as invigorate the intestines should be employed. A drink may be administered every morning for two or three mornings, composed of Epsom Salts, six ounces, dissolved in two quarts of thin gruel. The horse should be kept warm; his diet should consist of bran mashes, and his drink should be of thin gruel. After the complaint has been somewhat removed, the following pill may be given every day: Gentian, $\frac{1}{2}$ ounce; Columbo Root, $\frac{1}{2}$ ounce; Powdered Sub-Carbonate of Soda, one drachm; Ginger, one drachm; Castile Soap, $\frac{1}{2}$ ounce. Mix.

Inflammation of the Kidneys.

This disease may arise from the kidneys being injured from an improper use of diuretics, or over exertion in drawing too great loads, or hard riding; or it may be occasioned by a fever. It is indicated by weakness of the back and loins, the horse standing with his legs at a considerable distance from each other. The discharge of urine is either wholly prevented, or in small quantities, and as the inflammation increases, becomes bloody, and the voiding it more difficult; the extremities become cold, and cold sweats frequently break out; the pulse is also quick. A relaxation of the kidneys will sometimes occur without any inflammation; but this may easily be distinguished from the above, by the urine being of its natural color whilst the horse remains at rest in the stable, but as soon as he is brought into exercise the discharge of the urine is accompanied with blood.

For the treatment of Inflammation of the Kidneys, your principal sheet anchor is bleeding the patient plentifully, to the amount of from four to

six quarts; and if the inflammatory symptoms still continue for the space of four or five hours, do not hesitate to bleed again. After the first bleeding, immediately proceed to back-rake and clear the rectum well; then throw up clysters of warm water, until the bowels appear to have free passage. White Liniment should be well rubbed on the parts affected. Administer Castile Soap, $\frac{1}{2}$ ounce; Barbadoes Aloes, four drachms; Emetic Tartar, two drachms.

Inflammation of the Bladder.

An inflamed bladder cannot retain its contents, so there is a frequent evacuation of a small quantity of urine; and on passing the hand up the rectum, the bladder will be found hot and tender, but empty. The horse is also commonly observed to have a disposition to dung frequently, as well as to stale, from the sympathy of the rectum with the bladder. The fever is usually considerable, and the pulse is harder and fuller than naturally, but as the disease proceeds it usually becomes oppressed.

For the cure, bleed according to the height of the fever, and if no alteration take place for the better, bleed again as the pulse may indicate; back-rake, and throw up clysters of warm water, holding the tail down firmly, to prevent their speedy ejection. However, if such should be the case, have plenty of hot water ready to continue the injections, as in this case they act as fomentations to the bladder, and in consequence, greatly tend to relieve it. For internal remedies, give the same as in the preceding article.

Inflammation of the Neck of the Bladder.

Sometimes the neck of the bladder takes on inflammation alone, and this occurs more frequently to horses than to mares. It is to be distinguished from Inflammation of the Kidneys, because in passing the hand up the rectum, the bladder will be

found distended. This will also prevent mistaking it for inflammation of the body of the bladder. The frequency of making a little water will not, however, distinguish either of the foregoing complaints from this, as in Inflammation of the Neck of the Bladder, there is sometimes a small quantity of urine evacuated at different times. Take notice here ; for after the bladder is distended only a few drops will now and then be squeezed out ; but in this disease the frequent staling will not take place until the bladder be distended fully, whereas in the former disease, it will come on at the very first, and likewise in the latter case the distended bladder may be felt even by the belly. Having described the nature of this disease, the treatment is so very much the same as the two preceding cases that a repetition of them is quite needless, and would be tedious to the reader.

Inflammation of the Liver.

The liver of the horse is but seldom at first, of itself, affected with inflammation, though when other great abdominal inflammation takes place, then this often participates. With regard to the symptoms of this disease or complaint, they generally commence in appearance not very unlike a slight attack of Inflammation of the Bowels, but unattended with that rising up and laying down, which attends the latter disease. Still, the horse is apt frequently to turn his head to his right side, evincing pain ; also, if you turn him around in his stall, to the right hand, he will do it with great difficulty, plainly showing the pain he is laboring under. The extremities are generally cold ; considerable heaving at the flanks ; the pulse is quick and hard ; the mouth hot, attended with a yellowness of the lining of the membrane covering the same ; the nostrils and conjunction of the eye also participate in this yellow tinge ; these appearances being one grand

rule to lead to the discovery of the disease the horse is laboring under. This disease is frequently attended with costiveness, and in consequence of the secreted bile not passing off in the usual way, becomes absorbed into the system, and hence that yellowness of the skin and finer membranes mentioned just now. But occasionally in this disease, morbid secretion is set up, and the horse dung becomes remarkably black, attended with an exceedingly disagreeable smell. If the disease should terminate in violent discharges of the above named black, fetid stools, the horse frequently becomes a victim to the disease in about two or three days. If the extremities are not invariably cold, and the weakness not extreme (which, I am sorry to say, is too frequently the case,) but if the languor increase, and the extremities can not be made warm, and if the breath is hot and disagreeable, these symptoms are decidedly against the recovery of the horse.

For the cure of Inflamed Liver, we must first bleed to the full extent of the power of the animal, and if thought to be necessary, repeat in five or six hours. Apply the White Liniment to the right side, where the liver lies. If costiveness should appear, back-rake and throw up clysters of salt and water every three hours. Then give Blue Pill, 2 drachms; Cape Aloes, 3 drachms, and form into a pill, and repeat every six hours until it operates. In those cases where purging has commenced, the bleeding should be more moderate and sparing, unless the inflammation runs high, in which case your discretion must be brought into action. Give night and morning, if the horse should appear weak and much debilitated, take the following: Aloes, six drachms; Sulphate of Iron, six drachms. Give in a pill.

Jaundice.

This disease is usually attended with some local affection of the liver. It may proceed from want of

free perspiration, or from anything that creates severe action, especially from the liver. Sometimes it is occasioned by high feeding or habitual costiveness. This complaint is seldom dangerous in young horses, but a perfect cure is rarely effected in old horses, since in such cases it generally arises from a diseased state of the liver. This disease is generally termed the *Yellows*. It is indicated by the eyes appearing of a dusky yellow color, the inside of the mouth and lips are also yellow; the animal appears dull and sluggish, and refuses all kinds of food; his urine is of a dark brownish color, and when lodged on the ground seems like red blood; he also stales with difficulty, and his dung is very hard, and of a pale yellow color. The pulse is irregular, and he is attended with fever in a greater or less degree. If the disease and fever increase, unless speedily removed, death will undoubtedly ensue.

A modern writer observes: "The signs of the *Jaundice* in horses are a dusky yellowness of the eyes, the inside of the mouth and lips; the tongue and bars of the roof of the mouth also look yellow. But it is necessary to distinguish between the yellowness of the *Jaundice*, and that yellowness of the mouth and eyes which sometimes happens on the crisis of an inflammatory fever, where the inflamed parts look yellow when the fever and inflammation are going off. When this happens after a fever, the horse generally recovers his appetite, looks lively, and the fever leaves him. In the decline of an inflammatory fever, a horse dungs and stales freely. In the *Jaundice* the dung is generally hard and dry, and of a pale yellow color, nearly white. The urine is commonly of a dark, dirty brownish color, and when it is settled sometime on the pavement, it looks red like blood. He also stales with some pain and difficulty, and if the disease be not soon checked, all the symptoms will increase very rapidly."

I should bleed in the first stage of the complaint, especially if it should be accompanied by fever.

After this give a laxative clyster, and for physic Aloes, two ounces; Ginger, one ounce.

Swelling of the Breast.

This disorder usually proceeds from hard riding, allowing a horse to drink cold water when hot, a stoppage of the perspiration, or foul feeding without proper exercise. It is indicated by an enlargement of the breast, and the neck becoming stiff and incapable of reaching the ground; the horse also drops his head, refuses to eat, trembles with his whole body, and falters in his fore legs whilst walking. Occasionally the swelling extends towards the throat and threatens suffocation. If the swelling yields to the finger and the impression remains, it is a sign that it is dropsical, and the disease is then called the Water Farcy.

The cure is copious bleeding and the administration of clysters. For physic, give Castile Soap, two drachms; Aloes, eight drachms; Ginger, one drachm in a pill. If the swelling be dropsical, a fleam may be struck into the skin in four or five places where the swelling hangs most down, and from these places a serious discharge will take place. Rub on White Liniment, so that the absorbent vessels may be well stimulated.

Coughs.

The principal causes of coughs may be attributed to sudden changes of temperature, especially when cold is applied to the body whilst in a state of perspiration; or it may be occasioned by entering a warm stable after the animal has been some time exposed to the cold air. It will sometimes proceed from greasy or farcy humors being lodged in the body, or it may be caused by an internal irritation. Chronic cough must not be confounded with the cough which occurs in other diseases, as catarrh,

influenza, bronchitis, strangles, etc. This affection is known by a continued cough, mostly of a harsh, dry character, but in some cases a thick mucus is thrown out from the nose. The cough is mostly dry at first, and will sometimes continue so; but more generally, when the complaint is of some standing, the horse will cough up a frothy, white mucus. The pulse is not always affected in the disease, but is usually fuller and harder than naturally. A chilliness and trembling are frequently manifested at the commencement of this disorder.

When a cough has existed for a considerable period, and the horse shows no other particular symptoms of disease, but retains his usual appetite, it is denominated a chronic cough, which frequently terminates in broken wind. In a cough of this description the lungs are generally affected, and there is a quickness in breathing, but the nostrils are not much affected or distended. The cough is short and husky, causing the animal to sneeze frequently, and phlegm is discharged through the nostrils. When the animal appears hide-bound, his appetite failing, and his legs swelling, it is evident that the complaint proceeds from a bad habit of body. When a cough results from worms, it will be soft, and accompanied with a frothy mucus; the horse's coat will be staring, and other symptoms of worms be present. A cough resulting from deranged digestion is harsh and hard, and very violent, and generally occurs after eating, when the stomach is distended and pressing on the lungs.

The causes of this disease have been sufficiently explained in giving the description and symptoms. In a cough depending on irritation of the air passages and lungs, following other diseases, give this: Take Tartar Emetic, one ounce; Resin, two ounces; Bloodroot, one ounce; Salts of Tartar, two ounces; Ginger, two ounces. Mix and give a teaspoonfull three times a day in the feed. When the cough results from worms, treat the patient for worms, and

then give the above. When the cough is dependant on derangement of the digestive organs, give the following pill: Venice of Turpentine, two drachms; Asafetida, two drachms; Liquorice Powder, two drachms; Sulphur, one drachm. Mix in a pill, and give every other night for four or five times. It will generally be found useful. The horse is to have bran mashies, or carrots, if they can be procured.

Consumption.

Consumption may proceed from various causes; from colds imperfectly cured, or from the influence of the Farcy or Glanders fixing on the lungs. Hot and irritable horses are most subject to this disease, as they generally exhaust themselves by too great exertion. The first observable symptoms are a degree of hide-bound, with the common unthriftness of the coat. After a while, a slight cough may be observed, and the muscles may be observed to become flabby, the horse losing strength, and sweating on the least exertion. The breathing becomes more rapid and laborious, with slight heaving at the flanks. The cough becomes worse, but short and dry; the pulse will be found small and increased in frequency. The horse is down in spirit, and is evidently sick. Pressing on the spaces between the ribs will show signs of tenderness in the chest. The appetite is sometimes good, but at other times very poor. As the disease advances, all the symptoms become aggravated; the horse loses strength rapidly, the cough becomes worse, the breath very offensive, and a thick corruption, like matter, is discharged from the nose. Diarrhea, dropsical swellings on the legs, and great waste of the flesh take place, and death removes the doomed victim. Such are the ordinary symptoms of Consumption, and it is to be hoped they will be sufficient to enable the ordinary observer to detect the existence of this formidable disease.

For the treatment, the horse should be kept mod-

erately warm, and have bran mash and water with the chill taken off. The following pill may be administered every other night for three or four times, and then omitted for a few nights, and repeated again if necessary: Emetic Tartar, one drachm; Asafetida, one drachm; Liquorice Powder, two drachms; Ginger, one drachm. The whole to be mixed up with molasses.

Loss of Appetite.

This disease is generally termed Chronic Indigestion, and is indicated by a want of appetite, and also a roughness and staring of the coat. Should the horse have no inflammatory complaint, and it is evident that the loss of appetite arises from a weakness of the stomach, a cordial pill may be given every day, composed of Carraway Seeds, powdered, six drachms; Ginger, two drachms; Sweet Oil, two teaspoonfulls; Molasses sufficient to make the pill. Or the following: Cumin Seeds, four ounces; Anis Seeds, four ounces; Carraway Seeds, four ounces; Ginger, two ounces. Mix, and divide into pills, two ounces each. Give one every other day.

Plethora.

This disorder is somewhat prevalent in horses, and may be said to arise from their being pampered with high living, in order that they may look well and appear in high condition. When a horse becomes fat, gross, and full of blood, he is called plethoric. In this state the veins are full and distended, the pulse becomes full and strong, though it is occasionally much slower than is natural. Every exertion the animal makes is done with great difficulty, and fatigue, and exhaustion are soon apparent. If put to hard labor, he is soon wearied, and will sometimes die on the road; otherwise he becomes broken winded, or is attacked by the apoplexy or an inflammation of the lungs. Should no symptoms of

approaching apoplexy be visible, it is then advisable to diminish the animal's diet gradually, and increase his exercise or labor regularly. Bleeding, if it can be avoided, is not altogether proper, since it has a tendency to produce the same state it is employed to check. Should the symptoms appear dangerous, similar precautions must be used as are observed in cases of the Staggers or Apoplexy.

The Vives.

This disease usually proceeds from similar causes as the Strangles, such as catching cold, being over heated or over worked. Though this complaint is most incident to young horses, it sometimes attacks those more advanced in years, though they may have had the Strangles sometime previous. It may be distinguished from the Strangles by the greater violence of the cough, combined with an equal difficulty in swallowing. Vives, then, is an inflammation and enlargement of the parotid glands, situated and commencing at the base of the ear, and continued down to the angle of the jaw. This disease is by old farriers called the Bastard Strangles; but this is an error, for they have no affinity to Strangles in any way. They never suppurate, but they occasion great pain to the horse whilst eating, in consequence of the action of the jaw continually pressing on the enlarged gland. These swellings at times become so fixed that a cough and considerable irritation is produced about the anterior part of the epiglottis, (the part that covers the windpipe in the act of swallowing, to prevent food from passing down that tube,) and when food comes in contact with it, a cough is almost sure to take place, and the irritation is consequently so great that the horse will cough repeatedly.

Apply to the enlarged glands the following: Take Ammonia, one ounce; Olive Oil, four ounces. Rub about two tablespoonfulls of this liniment on each

gland morning and night, and take Aloes, 6 drachms; Ginger, one drachm; form into a pill with soft soap and give.

The Strangles.

This disease is indicated by a degree of fever, a painful cough, and a great thirst, with a difficulty of swallowing liquids, and loss of appetite. The inflammation sometimes occurs on the inside of the jaw-bone; at other times between the jaw-bone, that is on the submaxillary glands, which is considered the most favorable location for the tumor. Sometimes the parotid glands are affected, and swell up as high as the roots of the ear; the breathing is laborious, accompanied with a considerable noise in the throat; the nostrils are distended, and the eyes appear as though they were fixed in the head. That is what old farriers term Vives. When this disorder discharges itself at the nose, it is called Bastard Strangles, and if neglected or improperly treated, occasionally ends fatally, by affecting the lungs and bringing on Consumption. I could mention a number of horses in the town of Cambridge, Mich., that have died from improper treatment of this disease.

This disease rarely proves fatal. If colts while at grass are attacked by the Strangles, nature generally effects a cure, the abscess breaks of its own accord, and the animal recovers in a few days. When the colt is affected on being taken into the stable, or whilst breaking, should the attack be violent and the animal strong and full of flesh, about two quarts of blood may be taken, and the following purge administered: Ginger, one drachm: Aloes, four drachms; Molasses, four drachms. At the same time the swelling should be fomented frequently with hot Smartweed poultice made with bran; or the swelling may be dressed three times a day with White Liniment, a tablespoonfull at a time. If the tumor breaks, all the matter should be pressed out, and if the orifice is too small, make it larger.

Suppression of Urine.

This complaint may arise from a variety of causes, as whatever has a tendency to affect the parts about the neck and bladder—particularly matters of food or drink; blows on the parts; the contraction produced by spasms of the muscles in the parts, and others of the same nature. It is indicated by great uneasiness, irritation, and loss of appetite, with either a partial or total suppression of urine.

Clysters and mild purges should first be administered, for the purpose of clearing out the bowels; after which the following may be used: Camphor, three drachms; Opium, powdered, one scruple; hard soap, sliced, six drachms; Nitrate of Potash Powders, three drachms; Liquorice Root, powdered, $\frac{1}{2}$ ounce; Copaiba, enough to make a pill, which must be given once a day. During the course of these medicines, it is well to have some flannel cloths frequently squeezed out of some hot fomentations of Smartweed, and applied to the parts, between the legs of the horse, as near the neck of the bladder as may be. Give bran mash, and water with the chill taken off, may be given sparingly to drink.

Excessive, or Profuse Staling.

It is easily known by the abundant discharges of rather pale urine, attended with coldness of the skin, and a staring in the hair of the coat. When the complaint is of long standing, great weakness of the body is produced, with loss of appetite.

On the first appearance of this disease give Opium, powdered, one drachm; Alum, three drachms. Mix it into a powder, and give once a day in one half pint of warm gruel, made out of corn meal. The bran mash twice a day must not be forgotten.

Wounds.

The proper treatment of Wounds, in general, is undoubtedly a branch of the first importance in the practice of Farriery; yet very few understand it

perfectly, and many absurd and injurious opinions are entertained respecting them. It must depend principally on the parts where the wounds are inflicted, and the form of the instrument by which they were produced, in order to state a judicious method for their treatment. A clean cut made in the muscular parts is speedily cured by applying small slips of sticking plaster as soon as possible, by which the edges of the wound may be kept close together; or if a plaster can not readily be applied, a stitch or two may be taken through the edges of the wound, and the strings gently tied together. When the edges adhere, the strings must be cut away and the holes caused by them will soon close. Should any blood vessel be considerably wounded, it would be necessary to secure it by a ligature, if possible, rather than the application of any styptic substance. It is necessary that all wounds should be carefully cleaned before any attempt is made to heal them. The wound is sometimes so situated that there is no possibility of sewing it up; but generally in these cases, silver or steel pins may be passed from the edges about an inch apart from each other, and a thread twisted crosswise from one end to the other, in order to form what is termed the twisted suture. In every case where sutures are used, it is requisite that a sticking plaster should be applied over the edges of the wound. Should the wound not heal by these methods a formation of matter will occur, and the sore must be afterwards treated as a common ulcer—care being taken that its edges are always kept as near together as possible, by the application of a bandage or sticking plaster. When the tendon is wounded, it is proper to foment it with warm fomentations of Smartweed and bran. Spirituous applications and violent caustics are usually improper. Apply Black Oil to the wound twice a day. Wounds in the joints, though apparently trifling, are sometimes dangerous and difficult to cure; for their relief apply Black Oil four times a day.

Disorders of the Eyes.

Disorders of this kind are of such importance that it is highly essential that correct causes should be ascertained. In some cases a plethoric state of the body has a predisposition to inflame the eyes, and consequently it is frequently met with in horses five or six years old, at which age they usually cease growing, and are therefore more liable to a fullness of blood than at any other period. An inflammation of the eye will occasionally appear on a sudden; at other times the attack is gradual. The earliest symptoms which indicate this complaint are a swelling of the eyelids, but more especially of the upper, which can only with difficulty be kept open; the eyes water, and drops of tears are perfectly visible at the extremity of the lachrymal duct, which are not apparent in a healthy state; the eyes are of a black, glassy appearance, and become obscure and discolored; they sometimes appear of a dull white, and at other times they seem brown or blueish. Red vessels are visible over the white of the eye, particularly at the corners, and occasionally extending to the center. The horse holds his head down to guard against the light, while he is in this state. The ball of the eye and the eyelids are considerably hotter than they generally are, and a small quantity of thickish matter is sometimes visible through the corner towards the latter part of the anterior chamber of the eye. The cartilaginous membrane can now be perfectly discerned, by its projecting considerably outward from the corner of the eye.

When the disease has proceeded thus far, it will sometimes happen that it totally disappears and returns again in a short time. The disappearance of inflammation in the eye of this animal is so sudden, that the same eye which one day appears considerably inflamed, will sometimes be perfectly clear and healthy on the following day. It will occasionally appear and disappear periodically; and thus some have been led to suppose that it is affected by the

moon-blindness. However, should the disease continue and attain the length before observed, the inflammation proceeds, and the cornea gradually becomes more obscure, or it will frequently happen that the cornea recovers its transparency, and the crystalline humor becomes opaque. One eye only is generally attacked in the horse at once; and this disease is more prevalent amongst young horses than those more advanced in years. Sometimes we find men who state that the inflammation of the eye never occurs in horses until they are broke in, or taken from the pastures in which they have remained from birth.

The horse is generally attacked with this disorder in the night time, and it is usually thought to be of but little moment at first—the owner supposing the eye to have been injured by the halter or by rubbing against the manger or stall; but I never knew the disease to be produced by a foreign body, and as to producing it by blows, it is exceedingly difficult to wound the eye; but if it should be occasioned by a blow, there will be an abrasion on the external surface, and upon examining this, you will easily determine how to proceed. Take Extract of Saturn, four drachms, and spring water sufficient to fill a common sized wine bottle. Apply it five or six times a day. Or take Sulphate of Zinc, one ounce, and dissolve in the same quantity of water; either of which, if the inflammation arises from a blow, will effect a cure in a few days. Bleeding will prove serviceable in the early stages of this disease, but except the horse be in high condition, it should not be repeated. The veins at the corners of the eye should be opened for the purpose of drawing blood from that part. The best thing in the shape of lotion I could discover, is the following: Take common Salt, a tablespoonfull, and half as much spring water as will fill a common sized wine bottle. Bathe the eyes several times a day with the above, or you may take either of the lotions prescribed for blows in the eyes. I have de-

rived the most satisfactory results by using the following: Take Tartar Emetic, one drachm; Hog's Lard, one ounce; form into an ointment and rub on the horse's cheek, and also underneath the eye, until small pimples arise. Great care must be taken to prevent it from getting in the eyes.

Splents.

The Splent generally attacks young horses, especially on the fore legs, and may arise from their being more exposed to concussion, the weight of the body being thrown upon them during progression. This disease is generally apparent on the side of the shank bone, sometimes just below the knee. An enlargement of the bone will frequently take place. It is sometimes situated under the ligament or tendon, and is almost invariably attended with a degree of inflammation. Before the excrescences appear that displace a tendon, the horse will be lame; but much skill and experience are requisite to discover the exact part affected. When they are seated in the middle part of the shank bone, they are less painful and dangerous than when near the joints, but are more productive of lameness than in other cases. In young colts, Splents sometimes disappear of their own accord, being absorbed by a natural action of the vessels.

The most efficacious remedy is to administer a blister, which is to be composed of Cantharides, pulverized, $\frac{1}{2}$ ounce, mixed with Sweet Oil. Cut the hair off close all around the leg, and rub the blister in with the hand for about ten minutes; then tie the horse's head short close to the rack, lest he blister his mouth and blemish his leg by biting it. On the following day dress the part with hog's lard. If the Splent has not been of a long standing, take Spirits of Turpentine, one ounce; Olive Oil, two ounces; rub on this liniment night and morning, and apply a woollen bandage moderately tight around the leg.

Have the shoe removed, and apply a thick heeled one, as it will relieve the parts amazingly. If you have got English Black, apply that once a day until the part is blistered; then apply hog's lard twice a day, to keep the blister running and soften the skin.

The Ring Bone.

This disease has much similarity in its nature and causes to the preceding, and is most to be feared in large-boned, heavy legged horses. It is an enlargement of the lesser pastern bone, near the coronet of the hoof, and in general extends around the fore part of the hoof in the form of a ring. When formed more externally, and the ligamentous parts that join the hoof and the fleshy substance are affected, it is somewhat dangerous to such parts; but when they rise on the pastern and do not spread down to the coronet, there is no danger to be apprehended.

Blistering or firing are the only cures. Apply the same medicine as in Splents, if you have got it.

Stiff Joints.

This disease is generally occasioned by some accidental injury done to the joints by wounds, punctures, or similar causes, occasioning the requisite lubricating fluid belonging to such parts to discharge itself outwardly, and thus by the action of the air, considerable irritation and inflammation is excited. When the joint is wounded it should be attended to without delay, to prevent the discharge of this joint oil, or joint water, as some call it.

The best medicine to stop joint oil is to apply No. 1 Black Oil; or, if you have not this, apply Nitrate of Silver or Muriate of Antimony. The best method to use the latter is to apply it with a wooden skewer, making the point of it wet without getting it into the wound.

Strains in the Back Sinews.

Strains are usually produced by some violent exertion—galloping on a hard road, or by a blow from the toe of the hind foot, which will occasionally happen on a hard road, when the fore leg is kept too long in the ground by sticking in the clay. This generally occurs just above the fetlock joint, but the external appearance usually point out the seat of the disease. The inflammation ought to be removed by warm fomentation and bran poultices, and after it has entirely subsided the following may be applied: Crude Sal-Ammoniac, one ounce; Vinegar, one pint; mixed in a bottle. Or the following may be used: Camphor, two ounces; Alcohol, one pint; mix together for use. The part to be rubbed twice daily, a bandage dipped in vinegar bound around the leg.

The Thorough-Pin.

This usually takes place on account of some particular weakness or relaxation in the ligament surrounding the joint, and when pressed by the finger it disappears, but returns on immediately withdrawing it. This is a soft, flexible swelling, and appears on the two opposite sides of the hock joint at the same time—being supposed to pass entirely through the joint, thus deriving the name Thorough-Pin. There is rarely much lameness produced by this disease. The most certain cure is blistering. The liniment used to be composed of Cantharides and Spirits of Wine, as I have recommended for Splents. Black Oil I have found to be as good as anything, excepting White Liniment.

Venomous Bites, Stings, and Bite of a Mad Dog.

The bite of a rattlesnake or adder may be easily cured, if early attended to, by rubbing on the affected part, or the whole limb, Black Oils. Rub on one half ounce three or four times a day.

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Windgalls.

These most commonly proceed from immoderate labor; working horses too young; or allowing them to stand too much upon uneven floors, causing the fetlock joints to remain too long on a stretch, instead of being in a state of relaxation. These generally arise in small, puffy swellings, or enlargements, immediately above the fetlock joints, and appear in both the fore and hinder legs, though generally in the former. They are not, however, confined to these parts, but are sometimes met with in the hocks, near the knees, and in other places—in most cases existing without any degree of pain. In slight cases, washes of a cold, strong, astringent kind may be found sufficient to remove this complaint, but in inveterate cases, blistering and firing are the only effectual cures.

Blood Spavin.

This generally arises in consequence of overstraining and exertion, or from bruises or other local injuries on the parts, causing considerable weakness. It appears like a small, soft swelling, or enlargement of the thigh vein, in that part where it runs over the inside of the hock joint, and is easily distinguished by its giving way and disappearing in some measure, on pressure below it, and returning again on its removal. This disease is of rare occurrence, and never produces lameness. Repeated blistering is also necessary in this case, and is the only sure remedy.

Bog Spavin.

This disease is more frequent than is the Blood Spavin, and generally proceeds from similar causes. Nearly the same symptoms are generally apparent in this case as in the preceding. It is attended with a degree of inflammation, which causes an encysted

swelling or enlargement of the capsules, or the membranous bags that contain and afford the synovia that lubricates the joints at the upper and inner side of the hock. When there is considerable inflammation, fomentation and poultices must be applied, after which blistering will remove the disease. But if matter be collected, the whole must be opened and the cysts with their contents sloughed away by the use of dressings moistened with Spirits of Turpentine and similar matters, and eschorotic substances, such as dried Alum and Sulphate of Copper, should occasionally be put into the parts.

The Curb.

This disease usually occurs from protracted and excessive working in the field or on the road, or from local injury done to the parts. The Curb is most common in young horses, especially such as are cow-hoofed, and appears in small swellings on the back part of the hock. It generally causes a degree of lameness in proportion to the inflammation of the parts, and which rarely gives way of its own accord. In most cases where Curbs are not of too long standing, they may be removed by the application of blisters, or blistering liniments, but in inveterate cases firing will be absolutely necessary.

The Coffin-Joint.

This may be considered as a ligamentary lameness. In this the horse stands with his toe pointing forward, thus keeping the pastern in a straight line with his leg, and taking off the tension of the ligaments which unite the coffin-bone with the lower pastern-bone, becomes ossified, when the use of the joint is entirely lost. Should the complaint exist any length of time, it is almost incurable; blistering should be repeatedly applied as early as possible, around the coronet, until the disease be removed.

The String Halt.

This complaint is indicated by the horse suddenly catching up the hinder leg higher than is necessary while walking. The cause of this disease is exceedingly obscure, and it has always been considered as incurable.

Lameness in the Hip Joint.

During lameness in this part the horse drags his leg after him on the toe. The application of Camphorated Spirits of Wine, or Blistering Liniment is the best remedy. Lameness in this joint is often mistaken for lameness in the hock, but the symptoms are quite different.

Lameness in the Shoulder.

Lameness in this part is not very frequent. It is easily distinguished from lameness in any other part by the horse dragging his toe and moving his foot in an outward, circular manner at every step. My practice is to bleed in the vein near the shoulder, and then apply the following: Spirits of Camphor, two ounces; Tincture of Opium, three drachms; mixed in a bottle for use. Where there is a great stiffness in the parts, the following mixture will be more efficacious: Oil of Origanum, two drachms; Olive Oil, two and one-half ounces; Spirits of Ammonia, three drachms. Mixed and put in a bottle for use.

The Grease.

Heavy horses with round, fleshy legs, are more subject to this disease than any other kind of horses. It may be occasioned by sudden changes from heat to cold; the too sudden change from a generous to an impoverished diet; and from constitutional debility. It generally attacks horses in the Spring and

Autumn, and may, in most cases, be attributed to the want of proper cleanliness and exercise. The approach of this disease is indicated by the horse raising his foot frequently from the ground, and evincing great pain and uneasiness when resting upon it. Swelling and inflammation of the heel about the fetlock follow, which afterwards break out and discharge an oily matter of a peculiarly offensive smell. When the inflammation is extended to the cellular membrane under the skin, the pain and lameness are very severe. The affected part is soon brought to an abscess, and bursting, leaves a deep, ill-looking ulcer. In this disease the hinder legs are most commonly attacked, and the pain is sometimes so severe as to prevent the horse lying down, thus causing the swelling to increase and the disease to advance.

Slight affections of the Grease may generally be removed by a poultice of boiled bran and flax-seed, powdered, constantly applied and kept moist with warm water, and occasionally a mild diuretic may be given: Saltpetre, $\frac{1}{2}$ ounce; Resin, $\frac{1}{2}$ ounce, powdered; to be given in the feed. After the inflammation is abated, the following astringent lotion should be applied: Alum, powdered, $\frac{1}{2}$ ounce; White Vitriol, one ounce; Vinegar, eight ounces; Water, four ounces. Some prefer Vinegar, 6 ounces; Sugar of Lead, four ounces; Water, one quart. Mix.

Sand Cracks.

This disease is a partial division of the wall of the hoof, commencing at the coronet, and usually extending half way down the wall. When allowed to increase it produces lameness, and an inveterate Sand Crack will sometimes terminate in an ulcer, which, if not prevented, ultimately destroys the cartilages and bones of the foot. When the hoof is deformed by the ulcer, or quittor, and one part rendered higher than the other, it is called a False Quarter. When

the frog becomes diseased it is called a Running Thrush. An old and inveterate Sand Crack, penetrating between the horny and fleshy parts of the foot, is denominated a Canker. That part of the hoof which is cracked must be cut down to the quick, and dressed with tow dipped into Black Oil. Or take Spirits of Turpentine, two ounces; Lard, two ounces; and simmer together.

Contracted Feet.

A tendency to this disease is formed in some horses from the thickness of the wall of the hoof, but it may proceed from some disorder in the internal parts of the hoofs; from the pavement of the stall sloping too much; hardness and dryness in the horn, and is frequently increased by the use of the hollow webbed shoes, which do not fit properly on the heels. This disease is very common, usually affecting the heels, and comes on gradually. It is frequently attended with corns of a soft and red appearance, rendering the foot very tender and painful. Many barbarous and dangerous remedies are advised for this troublesome disease. However, the best course to pursue, in order to stop the progress of Contraction of the Hoof, is to turn the horse out into the straw yard, or into a soft and moist pasture, perfectly bare footed. Previous to this the hair must be cut off close around the coronet, and a mild blister applied, composed of Cantharides, powdered, two drachms; Sweet Oil sufficient to make it to the consistency of molasses. During the first day the horse's head should be tied up; after which period hog's lard should be applied to that part every third day. The hoof must be pared down as thin as possible, especially at the heels, the toe shortened and the quarters rasped.

rived the most satisfactory results by using the following: Take Tartar Emetic, one drachm; Hog's Lard, one ounce; form into an ointment and rub on the horse's cheek, and also underneath the eye, until small pimples arise. Great care must be taken to prevent it from getting in the eyes.

Splents.

The Splent generally attacks young horses, especially on the fore legs, and may arise from their being more exposed to concussion, the weight of the body being thrown upon them during progression. This disease is generally apparent on the side of the shank bone, sometimes just below the knee. An enlargement of the bone will frequently take place. It is sometimes situated under the ligament or tendon, and is almost invariably attended with a degree of inflammation. Before the excrescences appear that displace a tendon, the horse will be lame; but much skill and experience are requisite to discover the exact part affected. When they are seated in the middle part of the shank bone, they are less painful and dangerous than when near the joints, but are more productive of lameness than in other cases. In young colts, Splents sometimes disappear of their own accord, being absorbed by a natural action of the vessels.

The most efficacious remedy is to administer a blister, which is to be composed of Cantharides, pulverized, $\frac{1}{2}$ ounce, mixed with Sweet Oil. Cut the hair off close all around the leg, and rub the blister in with the hand for about ten minutes; then tie the horse's head short close to the rack, lest he blister his mouth and blemish his leg by biting it. On the following day dress the part with hog's lard. If the Splent has not been of a long standing, take Spirits of Turpentine, one ounce; Olive Oil, two ounces; rub on this liniment night and morning, and apply a woolen bandage moderately tight around the leg.

Have the shoe removed, and apply a thick heeled one, as it will relieve the parts amazingly. If you have got English Black, apply that once a day until the part is blistered; then apply hog's lard twice a day, to keep the blister running and soften the skin.

The Ring Bone.

This disease has much similarity in its nature and causes to the preceding, and is most to be feared in large-boned, heavy legged horses. It is an enlargement of the lesser pastern bone, near the coronet of the hoof, and in general extends around the fore part of the hoof in the form of a ring. When formed more externally, and the ligamentous parts that join the hoof and the fleshy substance are affected, it is somewhat dangerous to such parts; but when they rise on the pastern and do not spread down to the coronet, there is no danger to be apprehended.

Blistering or firing are the only cures. Apply the same medicine as in Splents, if you have got it.

Stiff Joints.

This disease is generally occasioned by some accidental injury done to the joints by wounds, punctures, or similar causes, occasioning the requisite lubricating fluid belonging to such parts to discharge itself outwardly, and thus by the action of the air, considerable irritation and inflammation is excited. When the joint is wounded it should be attended to without delay, to prevent the discharge of this joint oil, or joint water, as some call it.

The best medicine to stop joint oil is to apply No. 1 Black Oil; or, if you have not this, apply Nitrate of Silver or Muriate of Antimony. The best method to use the latter is to apply it with a wooden skewer, making the point of it wet without getting it into the wound.

Strains in the Back Sinews.

Strains are usually produced by some violent exertion—galloping on a hard road, or by a blow from the toe of the hind foot, which will occasionally happen on a hard road, when the fore leg is kept too long in the ground by sticking in the clay. This generally occurs just above the fetlock joint, but the external appearance usually point out the seat of the disease. The inflammation ought to be removed by warm fomentation and bran poultices, and after it has entirely subsided the following may be applied: Crude Sal-Ammoniac, one ounce; Vinegar, one pint; mixed in a bottle. Or the following may be used: Camphor, two ounces; Alcohol, one pint; mix together for use. The part to be rubbed twice daily, a bandage dipped in vinegar bound around the leg.

The Thorough-Pin.

This usually takes place on account of some particular weakness or relaxation in the ligament surrounding the joint, and when pressed by the finger it disappears, but returns on immediately withdrawing it. This is a soft, flexible swelling, and appears on the two opposite sides of the hock joint at the same time—being supposed to pass entirely through the joint, thus deriving the name Thorough-Pin. There is rarely much lameness produced by this disease. The most certain cure is blistering. The liniment used to be composed of Cantharides and Spirits of Wine, as I have recommended for Splents. Black Oil I have found to be as good as anything, excepting White Liniment.

Venomous Bites, Stings, and Bite of a Mad Dog.

The bite of a rattlesnake or adder may be easily cured, if early attended to, by rubbing on the affected part, or the whole limb, Black Oils. Rub on one half ounce three or four times a day.

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Windgalls.

These most commonly proceed from immoderate labor; working horses too young; or allowing them to stand too much upon uneven floors, causing the fetlock joints to remain too long on a stretch, instead of being in a state of relaxation. These generally arise in small, puffy swellings, or enlargements, immediately above the fetlock joints, and appear in both the fore and hinder legs, though generally in the former. They are not, however, confined to these parts, but are sometimes met with in the hocks, near the knees, and in other places—in most cases existing without any degree of pain. In slight cases, washes of a cold, strong, astringent kind may be found sufficient to remove this complaint, but in inveterate cases, blistering and firing are the only effectual cures.

Blood Spavin.

This generally arises in consequence of overstraining and exertion, or from bruises or other local injuries on the parts, causing considerable weakness. It appears like a small, soft swelling, or enlargement of the thigh vein, in that part where it runs over the inside of the hock joint, and is easily distinguished by its giving way and disappearing in some measure, on pressure below it, and returning again on its removal. This disease is of rare occurrence, and never produces lameness. Repeated blistering is also necessary in this case, and is the only sure remedy.

Bog Spavin.

This disease is more frequent than is the Blood Spavin, and generally proceeds from similar causes. Nearly the same symptoms are generally apparent in this case as in the preceding. It is attended with a degree of inflammation, which causes an encysted

swelling or enlargement of the capsules, or the membranous bags that contain and afford the synovia that lubricates the joints at the upper and inner side of the hock. When there is considerable inflammation, fomentation and poultices must be applied, after which blistering will remove the disease. But if matter be collected, the whole must be opened and the cysts with their contents sloughed away by the use of dressings moistened with Spirits of Turpentine and similar matters, and eschorotic substances, such as dried Alum and Sulphate of Copper, should occasionally be put into the parts.

The Curb.

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The Mange.

This common, but troublesome disease generally proceeds from want of cleanliness, unwholesome food, and a defective perspiration. This is a cutaneous disease, affecting the skin and rendering it thick and full of wrinkles, especially near the ears, mane, loins and tail. As the disease advances, these parts generally become deprived of hair, or should any remain, it stands erect like hog's bristles. These eruptions discharge a thick, yellowish fluid, and the horse suffers a perpetual itching, so that most of his time is employed in rubbing or biting himself, which disturbs him in taking his food and causes him to lose flesh for want of rest and quiet. This disease is highly contagious.

It is improper to bleed in this disease. The following ointment will be found beneficial: Hog's Lard, one pound; Sulphur $\frac{1}{2}$ pound; White Hellebore, three ounces. A moderate quantity of this ointment should be well rubbed in with the hand every third day, over all the affected parts. Two or three applications will generally suffice for a perfect cure, provided the food be good and nourishing, and proper attention is paid to cleanliness and exercise.

The following internal medicine will be useful during the application of the ointment: Black Antimony, $\frac{1}{2}$ pound; Flour of Sulphur, $\frac{1}{2}$ pound; Saltpetre, $\frac{1}{2}$ pound; Cream of Tartar, $\frac{1}{2}$ pound. A tablespoonful of these ingredients may be put into the horse's feed every night and morning. When a horse is perfectly cured, his harness must be well washed with soap suds, and the stall, rack and manger should also be whitewashed with lime.

Farcy.

It is one of those diseases to which the horse is liable, and for the cure of which, and its co-disease, Glanders, the veterinary profession have been more puzzled than with all the other diseases to which the

horse is liable. Until a modern date Farcy was not thoroughly known; for all the old writers said it was something the matter with the blood, but could not tell what. The French writers studied the disease and its nature, but still we got very little further on in progressive knowledge; and although at the present day we are not always enabled to promote a cure, yet there is some satisfaction in being able to define the disease in a much more enlightened form. Farcy, then, may be defined as an inflammation and suppuration attendant upon ulceration of the absorbents of the skin. It was formerly thought to be a disease of the veins, from its frequently appearing on the inside of the thigh, where they are conspicuous and prominent; but the disease does not lie in the veins. The disease being exterior to the trunks of the veins, and lying in the superficial absorbents of the skin which cover the veins, was not this proved to a demonstration, the veins would ulcerate and open, and considerable bleeding take place—clearly showing that the disease is in no wise connected with the veins. Externally the skin may be said to be the only visible part susceptible to Farcy; but when it runs on and becomes violent, the lungs also partake of it. Every part of the skin is susceptible to the disease, but not all parts equally so. Wherever the skin is thinnest these parts are more liable to become affected than where the skin is thick. This disease is generally ushered in with swelling and inflammation, then single tumors form; this goes on until matter is formed, suppuration takes place, and of course ulceration. The tumors do not always suppurate, but often become hard and scirrous. These, in the old farriers' language, are called buds, or farcy buds, and frequently many of them are formed, making a kind of chain; this is an absorbent enlarged and inflamed, and frequently will continue to enlarge to an alarming degree. These are the common symptoms and appearances of Farcy.

This disease, as we said before, is one in which less progress towards a cure has been made than almost any disease of the horse, and that in consequence of its containing a poison, which poison if applied to the skin of a sound horse will produce inflammation and matter of the same kind, and in all probability, if the matter becomes absorbed, it will produce Glanders. Still, this may not be the case, all constitutions not being equally susceptible of taking on the disease, though actually in contact with the poison—this, like all medicines, not having the same effect on all constitutions, more than this specific poison. However, this matter is proved to be contagious, because it is possible to produce it on a healthy horse. Here is one curious fact, also: if you insert the poison deep below the skin, it does not produce Farcy; but being absorbed into the system, it produces the Glanders. Reader, do you understand this? Question: Why does it produce Glanders? The reason is, because the poison is inserted below the skin in the second class absorbents. The first class absorbents do not inflame in this case—clearly proving it a disease of the skin, so that the deep seated absorbents become affected and the superficial ones not so. From this cause, if you were to skin a horse at this stage of the disease, there would not be the least appearance of it under the skin, nor can it be produced in a sound horse without an abraded surface. This called Button Farcy, and is intimately related to Glanders—it sometimes being called a twin-sister. The Water Farcy you will find described elsewhere in this book. No difficulty need be experienced in distinguishing between the two diseases. In the latter the swelling is in larger lumps, and is attended with puffy swellings along the belly. There are no knotted cerds or small buds to be found. Farcy may be distinguished from surfeits-lumps, which are large and irregular in form and of short continuance; sometimes subsiding in a few hours, but oftener remaining sometime. (*See.*)

The cure of Farcy may be obtained if it be purely local, such as when the buds are on the legs only so that it appears to be confined to the lymphatics of the skin ; but if the poison once enters the system, I should at once despair of anything like a cure. However, I have always treated it as a constitutional affection, not trusting in the local term or otherwise. If the horse should be in tolerable condition I should immediately bleed, according to strength, size, etc., giving the following : Spanish Flies, pulverized, one drachm ; Sulphate of Iron, two ounces ; Sulphate of Copper, two ounces ; Gentian, four ounces ; Mustard, three ounces ; Ginger, three ounces. Mix, and form into a mass with soft soap, and divide into 24 pills. Give one every morning, and apply Black Oils to the ulcers.

Glanders.

Glanders is divided into two stages, the Acute and the Chronic, or the first and second stages. Acute Glanders is generally attended with Acute Farcy, such as chancreous ulceration about the lips, face or neck, with considerable and painful swellings appearing in what the old farriers called a corded, or knotted vein. Ulceration and swelling of the hind legs or sheath, and sometimes of the fore legs with corded veins and what is termed farcy buds on the inside of the limb. The Acute Glanders often spreads rapidly, and either destroys the animal or renders him such a pitiable and hopeless object that the proprietor is generally induced to have the horse destroyed. Chronic Glanders is generally very mild in the first stage of the disorder, and does not affect the appetite or the general health and appearance of the animal. The second stage of Glanders is marked by ulceration within the nostrils, or an appearance in the matter which indicates ulceration, although sometimes too high up to be seen. The matter is in larger quantity and more glutinous, sticking

about the margin of the nostrils and upper lips, and sometimes obstructing the passage of the air, so that the horse makes a snuffling noise in breathing. In the second stage it is deemed incurable, and some writers only impose upon the credulous by prescribing their far-famed receipts for its cure. Instances have, indeed, occurred of the discharge being entirely suspended for a while, particularly after the animal has been at grass for some time; but the symptoms invariably return, and no authenticated instance can be found of a cure of the Glanders having been effected. Whenever it is clearly ascertained that a horse is glandered, he should be immediately removed from all other horses, and kept by himself. The rack and manger and all places should be well scraped with knives, and the entire surface of these parts whitewashed with a thick coat of lime and water. Treatment, see medicine for Farcy.

The Staggers.

The Staggers (Apoplexy) may arise from various causes; but it generally proceeds from some irregularity in the action of the stomach. It may be occasioned by blows on the head, causing compression of the brain, but it usually arises from horses having been allowed too great a quantity of food, or food of an improper nature. When a horse has been deprived of food some hours, and been working hard, he becomes so hungry that he voraciously devours every kind of food he can come at—swallowing it quicker than his stomach can digest it, and having no water to soften it and hasten its passage, the stomach becomes crammed, and through previous exhaustion, is unable to contract upon its contents. Thus the food soon begins to swell and ferment, causing considerable distension, and the Staggers are ultimately produced. This disease is sometimes, and very properly, called the Apoplexy. In some cases the horse drops down suddenly in a state

of insensibility, but it generally comes on progressively. It is first denoted by a degree of sleepiness and heaviness in the eyes, and an almost continual hanging of the head, accompanied by considerable feebleness. The horse stands dull, sleepy and staggering; when roused he looks vacantly around him, occasionally will seize a wisp of hay, and again doze with it in his mouth; at length he drops and dies, or the sleepiness passes off and delirium comes on, when he falls, rises again, drops, beats himself about, and dies in convulsions. In this disease there is little apparent alteration in the motion of the flanks, nor derangement of the pulse.

There is also a slight and temporary state of the Staggers, called the Megrims, which attacks some horses as soon as the circulation of the blood is increased by exercise. The animal in this case suddenly stops and shakes his head; if allowed to stand he generally recovers in a few minutes, but if imprudently urged forward, the fit increases so as to occasion his falling.

The most experienced practitioners in the veterinary line, recommend in cases of confirmed Staggers, to take at least six quarts of blood at once; and when this operation is completed, to rub a blister on the upper part of the neck on both sides of the mane, just behind the ears. The blister to be composed as follows: Spanish Flies, powdered, two drachms; Alcohol, two ounces; mixed in a phial. After which the following: Take Alcohol or any strong spirits, one pint; Tincture of Myrrh, two ounces; Camphor, one ounce. First dissolve the camphor in the alcohol, then add the tincture. Give this new milk warm. If the horse is no better in the course of an hour, repeat the draught. This will stimulate the stomach to a new action, in all probability, to get rid of its contents—the object so much to be desired. I have restored several cases by the above treatment, and if taken in time, I doubt of its ever failing.

The Epilepsy.

The Epilepsy sometimes proceeds from a plethora or fulness of blood, and often from violent exercise or surfeits, or indeed from any of the causes that produce lethargy or Staggers. When a horse is attacked with the Epilepsy he reels and staggers, and his eyes fixed in his head, he appears quite stupid and stales and dungs insensibly, trembles, looks around him, and falls suddenly. Sometimes he remains immovable, with his legs stretched out as if he were dead, except a quick motion of the lungs and heart, whilst his flanks work violently. Occasionally the convulsions which follow are slight, at other times violent. The head and fore parts are most affected, and the contortions are most singular. When this is going off he generally discharges a white and dry foam from the mouth. After the fit is over he shakes his ears, stales, and eats and drinks as though nothing had occurred.

In old horses this disease generally proves incurable, since, through their weakness, but little assistance can be given to the operation of medicines; but in ordinary cases the following may prove efficacious—care being taken to open their bowels previously, by means of clysters: Asafetida, 2 drachms; Emetic Tartar, one drachm; Camphor, one drachm; which must be made into a pill with liquorice powder and honey, and given every twelve hours.

Fevers.

A simple fever may proceed from various causes, such as an obstructed perspiration, arising from violent exercise and exposure to sudden colds or heats, or any other cause that tends to produce a degree of inflammation. A Fever is denoted by a loss of appetite; great restlessness, the horse ranging from one end of the rack to the other; the quick beating of the flanks; redness and inflammation of the eyes, and a parched, dry tongue. He also nib-

bles his hay without chewing it, and is frequently hanging his head down to the ground ; dungs often, but a little at a time and in small, broken pieces ; his urine is scanty and highly colored ; his mouth feels hot and dry, and his pulse beats high and hard. "The best criterion of fever in a horse," says Mr. Lawrence, "is the pulse. The best situation for feeling it is just under the edge of the jaw bone, where the facial artery is covered by the skin only, and as it rests against the bone, its strength or weakness of pulsation may be ascertained with the nicest exactness and accuracy. When the animal is in health the pulse generally beats from thirty-six to forty strokes in a minute. The pulsation is regular, and the artery neither feels hard nor soft, but perfectly elastic ; but when under the influence of fever the pulse is sometimes increased to more than double its natural number of beats, and the artery frequently becomes so hard and rigid as to resist the pressure of the finger and to slip aside from under it."

The first plan to adopt is copious bleeding. If the horse be strong and in good condition, three or four quarts should be taken, and the bleeding should be continued until an alteration of the pulse takes place, the hardness of the artery be removed, and the yellow or buff coat on the surface of the blood becomes thinner. For medicine to be given and treatment, see Lung Fever.

TREATMENT OF SICK CATTLE.

Great care and good management are essentially necessary to the recovery and well-being of sick cattle. Without these, in vain may medicine be administered. At the first attack of any disease, solid food should be but sparingly given, and a tolerably warm cow-house receive them. A beast in perfect health has generally more than eighty pounds weight of solid food in the stomach, which of course requires time for digestion. When a beast is afflicted with any disorder, attention should be paid to the chewing of the cud, and to the manfould, where many a fatal disorder has its seat. Corn meal gruel seasoned with salt and a little butter, given at the rate of two quarts every four hours, is sufficient to support cattle when afflicted with a disorder. Glauber's Salts and Nitre have a good effect; eight or ten ounces of the former and of the latter, to be given in flaxseed tea once a day, till they recover their cud. Juniper berries are also of great use in recovering the cud; for which purpose they should be given whole into the mouth, to the grinders, five or six times a day. Cattle in most diseases are fond of fresh mould, in which you may indulge them, being careful to get your mould under a hazel bush, where it is the sweetest. Let them lick their full of it, for it will never hurt them. A hornful or two of fresh mould and salt may safely be safely given to a beast that has lost its cud, which in that state very often prefers bad hay rather than good, and you may let it eat as much of it as it will take.

Flaxseed tea, with a little butter put to it, is a valuable mixture in almost any disorder. Malt mashes may be safely given when the beast will take them. Bran being often of a bad quality, is seldom fit to be given to a sick beast, and meal dust and rough seeds are still more dangerous, for I have known many cows and horses to lose their lives from the use of bad drugs, etc.

It is sometimes hard to find out the disorders of a beast. In all cases examine the breath. If it be strong and offensive, give tea made of bitter herbs, such as wormwood, tansy, chamomile, pennyroyal, or of some part of them, which will strengthen the stomach and cleanse it. When a beast is taken sick, and the disease is not properly understood, give a gruel made of flaxseed, with one ounce of saltpetre, after which the disease may be found out and the proper medicine applied. Bleeding is necessary, and of essential service when the legs of cattle are swollen, and when their eyes look heavy, of a dull red color and inflamed. It is equally necessary when they are too highly fed, in which state they are induced to rub their hair. Bleeding should also be used in all inflammations, fevers, bruises about the eyes, and sprains when accompanied with inflammatory symptoms.

To Help a Cow in Calving.

There is often great mischief done from the want of understanding how to help a cow in calving. I here give you the best advice that I can, and I have had very much practice in the business. In the first place, do not be too hasty in your proceedings, for sometimes a cow will have pains on her, and part with a little water, or loosening, and the pain will go off again, and sometimes the neck of the calf bed, or what is called the yambs, will fall down and give pain to the cow. I have been fetched a great distance to cows many a time, and found that before

I arrived, some persons had tried to get their hands into the calf bed and could not force a passage ; and sometimes people have been so foolish as to endeavor to cut a way to the calf. Such a proceeding is downright butchery, and any one with an average amount of intelligence ought to know better. Only give time and the calf bed may open of itself. There are two water bladders, and sometimes three, to one calf, and when the first comes in sight and bursts, the cow is at calving. If she can not part with it, put up your hand to feel if it is all right, and if it is not, endeavor to put it so as near as possible. If the calf is right in the cow, it will have its back to hers and a fore leg on each side of its head. When this is the case, there is no fear of the cow not parting with it ; but even in this case she will want a little help sometimes. In some cases one foot is right and the other wrong, and you must be sure to get them both right before you offer to draw the calf. Be careful to have the back of your hand next to the calf bed, that you may not hurt it with your fingers. If the cow pain much against you, raise her behind to give you more room. Sometimes the hinder parts of the calf come first, with both hind feet down ; then let some one that is by put his left arm into the cow to find the tail, and putting his fore finger and thumb under it, thrust the calf into the cow ; then you, with your right hand, fetch the feet up, and then it will come away as well as if head first. If the cow pains much against you, your arm will be cramped, unless the calf be thrust into her by the other person, as directed. Sometimes the head is fallen back, and as you put your arm into the cow you can not find it. It may be under the calf, in which case turn the calf over, and then try to find it, and if you do not, raise the cow well behind, that you may be able to move at liberty, then lay it in as good a form as you can, and if it still falls back, put a crook in its nose (or, in other words, a hook made for that purpose,) with the point turned

in in the form of a ring, that it may catch nothing to do mischief. Sometimes the neck of the calf is twisted, but it must be straightened before the calf can be drawn.

When a cow is long in calving, the hair of the calf gets dry. In that case, grease it well with hog's lard or butter, and it will pass the isin bone much easier. When a calf is swelled or in a dropsy, which is the worst kind of calving, its head is so large that the passage is too small for it, and its body so much swelled that there is neither room to draw it nor stir it in the calf bed. In this case the calf must be stabbed with a lancet or a sharp pointed knife, in many places, wherever you can get the lancet in. Then give the cow the following medicine: Tincture of Opium, one ounce; Sweet Spirits of Nitre, two ounces. Bed her well down, and leave her to rest. If she is pretty easy twelve hours after, feel if the swelling of the calf is abated; if it is you must try to get it from her, but if not, you must repeat the above medicine, and leave her for eight hours more. By this method I have saved several cows. Some will say that they cannot get their hand into the mouth of the calf bed, because it is drawn up. If this is the case, by no means cut it, for cows that are cut mostly die, although I have cut many myself. Two years ago I was called on in a case like this. The cow doctor had been trying all day to take away the calf, but the mouth of the calf bed was so small that he could only get his hand in, and one could just see the nose of the calf. He had tried to stretch it with a stick, but could do no good with it; and finally he sent for me. Of course I went—cut the calf bed open, and immediately the calf came. He said every one he had opened died; I told him all had lived that I had opened. I open them in this way: I cut the mouth of the calf bed in the thinnest part; feel if there is any beating of the artery, if none, cut. It is not often that a milk fever takes place in a cow that has had a hard time in calving;

but should such be the case, you cannot do better than follow the advice given in that disorder. I advise all not to have their cows in high keep at the time of calving, for there are five fat cows lost to one lean one, and few or none in low condition have the milk fever. But should your cow be in high condition, be sure to bleed well, and to draw the milk from her as much as you can before she calve, and by this means you may, perhaps, prevent further mischief.

A DRINK TO CLEAN A COW AFTER CALVING.

Gum Myrrh, one ounce; Juniper Berries, two ounces; Ginger, two ounces; Black Antimony, two ounces; Saltpetre, two ounces; Aloes, one ounce. Mix with four ounces of soft soap, and divide into three or four pills. If you want to make a drink of it, pulverize the pill fine, and put it into one pint of cold ale or four ounces of spirits of any kind, and add molasses. Give it fasting, and to fast two hours after. It seldom fails to bring the cleaning from her, and if the cleaning has come away, you can not give a more proper drink after calving. It helps the discharge from the calf bed, which is commonly called fye, and both causes the cow to milk better, and to do better.

Many people take hold of the navel string, and draw gently until the cleaning comes away. They do not know whether they pull the calf bed back or not, nor whether the roses have parted with the cleaning or not, and it is seldom such pretenders are at hand just when the calf is drawn. Some people are so sparing of their money, that rather than part with one shilling, they will run the risk of losing twenty or thirty dollars, and rather than be at the small expense of a drink, will let the cleaning rot from their cows. This is a great folly of short-sighted man, for he loses five times as much in the end, and does the cow a great deal of hurt; nay, in my time I have known scores of beasts lost by niggardly, covetous people, who would be at no ex-

pense with them when disordered. I wonder that the Lord permits such earthworms to have cattle, for they not only hurt themselves, but the public at large.

If a cow does not clean in twelve or fourteen hours, I should take away. I have taken scores away in my time. I take hold of the navel string with my left hand, and then with my right I follow the navel up to the roses, or buttons, some call them, of which there are twelve in number. The first button on the right side I unbutton with my finger and thumb and draw it out of the calf bed, then I go back again, following the navel up into the calf bed, and take hold of the second button, as above, until I get out five or six buttons, and then commence on the other side, and proceed in the same manner until done. The last button that the navel is attached to lies back in the bed. I break off the navel string as far in the inside of the cow as I can. Now you have done, I would say, you can not reach the button that the navel is attached to. But I draw the navel string gently with my left hand until I can reach it with my thumb and finger of my right hand, and unbutton as before mentioned. If I can not unbutton it, I break off the navel string as close to the button as I can. Afterwards I simmer together before the fire a little Black Oil and lard, two parts of the latter to one of the former, and introduce into the calf bed. Apply clear Black Oil to the spine of the back and the roots of the horns; or if you have not the Oil, take laudanum and lard, equal parts, and introduce it into the calf bed. I give at the same time the cleansing drink or pill before recommended. If a cow be in great pain, add to the drink one ounce of laudanum.

I would remark here that I forgot to tell you to give the second pill twelve hours after giving the first, if the cleaning does not come away; and if it has not come away with the second pill, give the third. If the third does not start it, it must be taken

away in the manner I have described. I have had persons come to me saying that they had a very sick cow, and anxious to have me go with them at once. I ask, Has she had a calf lately? "Yes, four days ago." Did she clean good? "She was twenty-four hours before she cleaned, and then I pulled it away." Did you get it all away? "Yes, I think I did." I have gone to a dozen in the town of Cambridge, in a year, and always find the navel string to be broken off, and have also found great inflammation on the roses, or buttons. I moreover found the buttons twice as large as they ought to be, and not one button unbuttoned, and the navel to be so short that I could not get hold of it; and it was with the greatest difficulty that I could get my hand into the calf bed. However, in such cases, I get away all I can and let the rest go, and apply freely Black Oils. Of course it would put the cow to a great deal of pain, but it cuts away all the cleaning that was left, and also puts a stop to inflammation. I would advise all persons to never pull on the navel string. If you find the cleaning to be fast, it is because there is something the matter with the cow.

The Milk Fever in Cows after Calving.

This disorder chiefly happens the day after calving. The pulse is low and irregular, the eyes dull and heavy; the cow starts, flutters and staggers till she comes down, and the milk can only be got in small quantities at once. This disorder mostly happens when the cow is full in flesh, and may occur at any time of the year, but is not so dangerous at hard meat as at grass; one reason for which is that the weather is not so hot. It might often be prevented by bleeding and milking before calving. It never happens with the first calf, and seldom with the second, but chiefly to great milkers, for few others have it. People having a cow that has had this disease, should not let her take the bull again, but fat her,

for if she calve and have the disorder again, there is little hope of her recovery.

The first thing to be done is to let blood pretty freely, and to lay her as easy as you can. She will soon have a strong pulse and high fever, therefore be careful to prevent her being too hot if in summer, or too cold if in winter. Cooling medicines are best for her. Spirits of Sweet Nitre, 2 ounces; Cream of Tartar, three ounces; Salts of Tartar, two ounces; Emetic Tartar, two drachms. Give this in slippery elm tea. Pour a hornful or two of cold water into her every two hours, and let her lie on the milking side mostly, upon plenty of straw, and where there is room to stir; and draw the teats often to get what milk you can from them. This disorder lasts two or three days. If the cow can bear under it for two days there is great hope of her getting better; for in this as well as in Redwater, people will persuade the owner to give first one thing and then another, when they neither know the disorder nor the medicine; and I have known some to advise him to get the cow on her feet and to sling her, when she has not been able to hold her head up—a ready way to kill her. Never offer to get the cow up till she is able to stand. If she can not turn herself, turn her three or four times a day. When the fever is abated she will want nourishment. Give her good gruel made of meal and water. Six hours after giving the first medicine, give as follows: Epsom Salts, four ounces; Spirits of Sweet Nitre, two ounces; Emetic Tartar, two drachms. If in great pain give one ounce of laudanum, mixed with the rest of the medicine. If the cow does not get up in four or five days, rub the following on her loins: Oil of Origanum, Oil of Spike, Oil of Amber, Spirits of Sal-Ammoniac, one ounce each. Put all in a phial together, and shake well; then rub one-half on, and the remainder in twenty-four hours after. I have laid down the best method of treatment and the most proper medicine that I know of,

but if anything fresh occurs, I must leave it to your own discretion. I have practiced some twenty years, and have had good success. ‡ When called in time I most generally save them. It is a heavy disorder, and kills many.

The Felon, or Hide Bound.

Many disorders that go by this name are nothing of the kind. Too many pretend to know something about a cow who know nothing whatever about this complaint, but give other disorders the name of Felon; and some make four kinds of Felon, to wit: Hide Bound Felon, Heart Felon, Water Felon, and Cripple Felon or Felon in the limbs.

The following are the symptoms of the Felon, or Hide Bound: The beast's hide is stiff and not good to get hold of; it loses flesh, walks stiff in its limbs, its eyes look dim and watery; its hair stands straight on its back, and it neither eats nor drinks so freely as it should do. When you find a beast in this state you may be sure it has got the Felon, and I shall here lay down a few receipts for the cure of it. The following is for a strong or large beast: Flour of Mustard, four ounces; Anis seeds, powdered, one ounce; Ginger, two ounces; Long Peppers, powdered, one ounce; Canary Seeds, powdered, one ounce; Molasses, four ounces; mix in half a pint of spirits of any kind. To be given fasting, and the beast to fast three hours after.

The Felon.

This mostly happens at the end of July or in August, to cattle that are fattening. Milch cows, oxen, and heifers that have never had a calf, are liable to it. I have known heifers to have it to such a degree that one quarter of the udder would drop out. I need not describe the complaint, which is so well known; but I will remark that there is a strong

fever at the beginning. The first thing to be done is to bleed well. Some graziers object to bleeding, but they are mistaken, for both reason and experience tell us that bleeding must be proper at the beginning of the fever. If you bleed and physic your cattle every ten days when the disorder prevails, it will prevent many from having it, and such as do take it will have it more mild. At this season of the year high winds and cold rains are very frequent; and it often happens that when the weather is very hot a thunder storm changes the air suddenly. When you find a beast with this disorder, give the following: Jalap, powdered, one ounce; Flour of Sulphur, eight ounces; Cream of Tartar, two ounces; Calomel, one drachm; Ginger, powdered, two ounces. Mix all together, and give in a little corn meal gruel. This recipe is well calculated to cool and abate the fever, and to thin the blood. Glauber Salts is also a fine cooler. In three or four days give twelve or fourteen ounces of it, and two ounces of Saltpetre dissolved in hot water, and give nearly cold. Repeat either of these as you find it needful. The first of them is one of the best yet found for this disease, and the last is of great service. If the joints of the hind legs are swelled, rub them with the following mixture: Turpentine, two ounces; Oil Origanum, one ounce; Spirits of Sal-Ammoniac, one ounce; Sweet Oil, two ounces. Mix it in an eight ounce bottle, and shake well. If you have any White Liniment, that is better yet.

Falling Down of the Calf Bed.

This often happens after calving. When it takes place, be careful to wash the calf bed well, and remove every part of the cleaning from the roses, or buttons. Be cautious not to damage the roses, for when the cow is not at her full time they part sometimes hardly, and you had better leave some of the cleaning on them than injure the calf bed by forcing

it off. If the calf bed has been down sometime before being discovered, especially in winter, and it is cold, be sure to foment it with milk and water, to bring it to a natural warmth before you put it up; for if you put it cold into the cow, it will give her great uneasiness and cause her to throw it down again, and there will also be danger of its bringing a disorder on her. Some people are so foolish as to put powdered resin on the calf bed to keep it up; but instead of keeping it up, it is the direct way to cause the cow to throw it down again, and reason will tell any man that the cow needs nothing in her calf bed but what nature formed there.

When the calf bed is thrown out of the cow, it is something like the lining of a hat when fallen out. When you put it up, have the cow on her feet, oil your hand, put your fist to the lower part of the bed, and when you come to the barren, or what is properly called *labia pudenda*, thrust gently with the back of your hand and let the lowest part go in first. If you can not get it in this way, let some one hold the calf bed up in his hands, and then thrust it in by degrees. Let the nearest part go in first, and when you have got it in its place, put your hand in the cow as far as you can reach, that it may not be left double, but be rightly placed; and keep her as high behind as you can, that she may not throw it down again. It will be necessary to give an ounce of Tincture of Opium in four ounces of spirits, to remove the pain.

Another grievance that frequently happens is the falling down of the neck of the calf bed. This often occurs when a cow has the calf in her, and sometimes to one that is not with calf. It is easily put up again; for if you put it in the barren it will go to its own place, but it is bad to keep there. Some put a skewer, with a hole in the end to fasten a soft band or string to, across the barren, and then wrap the band around the skewer to tie the lips together, and a cork on the sharp end to keep it from prick-

ing the tail. Some sew the barren up with a leathern string; but in that case, be careful not to put the stitches too near each other, so as to stop the urine. Sometimes I put Black Oils across the loins. This will have a tendency to keep it up in its place.

Inflammation of the Neck of the Bladder.

This too often happens, especially when a cow is in high condition, and has a hard time in calving. To discover this disorder, which is not very easily done, observe the following symptoms, which are the most common. The beast is very uneasy, at getting up or lying down, it only lies down a few minutes and then gets up again, wags its tail, looks back at its hinder parts, shifts its legs to make water, sometimes parting with a little, and sometimes none at all. The water it does part with is very clear, and if you catch it in your hand you will feel it very hot. When the disorder has taken place, bleed well in the neck, and after you have drawn a good quantity of blood, give the following: Epsom Salts, six ounces; Cream of Tartar, two ounces; Saltpetre, two ounces; Vinegar of Squills, one ounce. Put eight ounces of flaxseed into a jar, and pour three pints of boiling water on it; clear it off in five or six minutes, and give the above in the tea. Powder the saltpetre before putting it into the tea. Make the flaxseed into a mash, and give the cow for food, to be repeated every twelve hours. Warm deluting clysters are very appropriate, and therefore give one every four hours.

Inflammation of the Liver.

This disorder is not so common as some. It seldom happens to lean beasts. It is chiefly brought on by driving in hot weather. When a beast has this disorder its eyes look red and water much, and its tongue has a thick white scurf upon it; its pulse is quick and strong; its body fuller than what it

should be for what it eats, and slaver runs down from its mouth. It also groans, and is short of wind, which is caused by the liver being swelled and pressing hard against the midriff, and thus straightening the chest. The liver is seated near the heart and the midriff, and the heart receives the blood from it by the vena cava and throws it back again by the vena porta. The first step to be taken is to bleed pretty freely, and then to give the same medicine as in the jaundice, for this disorder so much resembles the jaundice that it may justly be called a branch of it. If the fever bring on costiveness or hardness of dung, give Glauber's Salts to keep the body open, and let the animal's food be of a cooling, opening nature. Bran mashes is the best; but in the spring and summer time herbage will carry off many disorders. For medicine see jaundice.

The Yellows, or Jaundice.

This disorder often happens to cattle, and arises from too great a quantity of bile, which forces itself into the blood, and the liver causes the blood to press too much upon the gall bladder. I need not enumerate the stages of this disorder, but will point out how it may be known and how to cure it. It is well known that the Jaundice is an overflowing of the gall bladder, and the yellowness of the eyes and nostrils will point out the disorder. There is also a constant itching all over the body, and if the beast have any white hair it will turn yellow; if it give milk that will also be yellow, and its urine will be yellow, and sometimes almost the color of the blood. Its dung will be hard and tough, almost like clay. Cattle in this disorder are not fond of stirring much—it being of a very sluggish nature. These are the general signs by which this disorder is known.

In the first stage, let blood; and if the pulse be strong, bleed again in twelve hours, and as soon as you have let blood give the following: A small

handful of bayberry bark, if you can get it ; boil it in two quarts of water for fifteen minutes, and when cold clear it off and add Best Madder, two ounces ; Turmeric, two ounces ; Turpentine, one ounce ; Castile Soap, three ounces. Mix the turpentine with two hen's eggs, cut the castile soap small, put all together, and boil it for four minutes in three pints of water, then let it stand till nearly cold before mixing. Repeat the above every twelve hours for two days, which will be four times ; for the Jaundice is a disease that will not submit to trifles, and if not removed there will be danger of the Black Jaundice taking place. If the beast get no better in three days, give the following : Oxymel of Squills, two ounces, Epsom Salts, four ounces ; Oil of Juniper, $\frac{1}{2}$ ounce ; Venice of Soap, two ounces. Give it twice a day in corn meal gruel. These medicines are also good in Inflammation of the Liver.

Inflammation of the Stomach.

This is a most dangerous disorder, and but little known to cow keepers or cow doctors. When the disorder takes place, it is known by the beast being too full on the side contrary to that on which you milk ; the beast is restless, lying down and soon getting up again, shifting its hind legs, making water often and in small quantities, holding up its tail, and pains itself to dung. It looks wildly with its eyes, and on lifting up the eyelids you will find them redder than they should be. I have seen the paunch, or bag, rise and fall again, and continue doing so for some time.

When this disorder takes place, the first thing to do is to bleed freely, and then give six or eight ounces of castor oil. If you have not got the castor oil, use a pint of sweet oil instead, and if that be not at hand, give the beast eight ounces of melted butter or hog's lard in warm water. Another receipt : two ounces of Salts of Tartar ; one ounce Saltpetre ; and

one ounce of Volatile Salts, powdered and put into a half pint of vinegar; and give this mixture while in a state of fermentation. If this does not effect a cure, give the following: Yellow Bark, powdered, one ounce; Camphor, one drachm; Gum Myrrh, in powder, $\frac{1}{2}$ ounce. The camphor and the myrrh to be powdered together, and the whole to be given in a quart of juniper berry tea. If then the disorder be not abated, give the following in juniper berry tea: Tincture of Gum Guaiacum, two ounces; Tincture of Opium, one ounce.

The Quinsy.

This disorder is very common among horned cattle of all kinds. At the beginning the beast slavers much, thrusts out its head, its spirits are depressed, and it moves but little about. If it be in summer time, it will be often under the fences, chewing leaves of trees and putting them out again; and if you examine, you will find the roots of the tongue much larger than usual; the vives, also, near the ears are much swelled. When you find that the beast has this disorder, take it into the house and rub it with the following: Turpentine, two ounces; Oil of Linseed, two ounces; Spirits of Sal-Ammoniac, two ounces. Shake well together, and rub the beast three or four times a day, to try and turn the disease back again. Sometimes the swelling breaks inwardly and discharges itself at the mouth. When that is the case the beast soon gets well, but when the matter gathers in a bag at the roots of the tongue it is very tedious. Some beasts have had a bag of matter at the roots of the tongue which has not been perceived until they were dead. The bag lying on the upper side of the gullet and windpipe, was not discernible either by the eye or the touch. The swelling in the vives (commonly called the bur,) is often mistaken for the Quinsy. This lies between the ear and the roots of the tongue. I wish people

would be careful in distinguishing between these two disorders, for the latter is of little consequence compared with the former. If you have a knife to use in the Quinsy, and make an opening into the bag of matter, keep the orifice open with tents made of tow, dipped in the liniment before mentioned, or Black Oil is the best, if you have got it. For the swelling in the vives, rub well with the following: Spirits of Hartshorn, two ounces; Sweet Oil, two ounces.

Poison, or Swelling in the Bowels.

This disorder is nearly the same as eating too much clover, though it is not clover that causes it, but too much herbage being thrown into the first stomach, which heats and swells before it is thrown back again: and when weight presses upon the arteries or blood-vessels, it causes a stagnation of the blood, or what is called a stoppage of blood, and in this case, unless found in time, the animal will soon be dead. The first thing to be done is to let blood pretty freely; then give a pint of sweet oil, or if that can not be got, give ten or twelve ounces of melted butter. If the beast be able to walk, walk it about a little, and if that will not answer the end designed, stab it with a knife at least an inch broad, if broader, no worse, as the orifice which is cut is oftener too narrow than too wide. Be careful to keep off the loin, for when the animal is so swelled it is very deceiving. The right place is half way between the rib and the huck bone, on the contrary side to that on which you milk. After the wind has got out, cover the hole with a plaster of any kind, to keep from letting the wind in. When I find a beast bloated, the first thing I do is to give one-half pound of pork, cut in seven or eight slices. If no better in ten minutes, give more, and if no better in ten minutes, give still more. I bleed to the amount of six or eight quarts. Sometimes you find the

beast so badly bloated that you have no time to wait for the medicine to take effect. If that should be the case, stab it as before directed. When I have found them only slightly bloated, I have always relieved them with pork by the first time giving it. At any rate, stabbing is the last remedy.

The Scrofula, or Scab.

This disorder is not very common, but when it does appear it is often neglected. At the beginning people take it for some other disease breaking out; and the old saying is, it is better out than in; but at length the disorder appears to any one that is at all acquainted with the diseases of beasts. When this grievance is checked in time, it is much better for both the beast and its owner, for it is a troublesome disorder. Some say that it is only a surfeit that is breaking out, and so it may be; but such surfeits bring on the Scab. They say, perhaps, that a Surfeit and the Scab are different things. So they are, but a Surfeit may turn to the Scab. When there is heat in the skin and dryness in the hair, and the beast is continually rubbing itself against anything that is near, you make yourself sure it has got this disorder. I have known the complaint to continue so long that the neck and back of the beast have been nearly covered with scales. In the first stage of this disease the skin or hide is hot and dry, but the insects soon gather more closely, and then it breaks out into little ulcers, when it may justly be called a Scrofula. The ulcers will throw out a thin matter, which is very offensive to the beast and its owner; then the ulcers will turn to scales. You will say that you can not see any insects; nor can you with your naked eye, but with a glass you may. If there are many beasts together, the disorder will spread among them all, if not prevented.

The first thing to do is to give them cooling medicines: Nitre, one ounce; Jalap, one ounce; Cream of Tartar, two ounces; Calomel, 8 drachms. Give it

in warm gruel three times, two days distance between each time, or if it work the beast sharply, let the distance be three days. When you have given the first dose, rub with the following: Sulphur, eight ounces; White Hellebore, four ounces.

Lice on Cattle.

I need not say much under this head, for it is well known to cow keepers; but one thing I will say—the sooner you get rid of them the better, for they always make a beast uneasy. I would advise those who have lousy cattle not to apply quicksilver, for many a beast has been killed by rubbing a sixpenny-worth of quicksilver on it to destroy lice. You may think that a small matter to kill a beast, but I assure you it will. Use the following, and there will be no danger: Two ounces of staves acre in powder; boil it lightly in three pints of chamber-lye, and when nearly cold rub the beast well with it. Be careful to rub the powder on with the chamber-lye. This quantity will do for a small beast, but a large one will take three ounces of staves acre and two quarts of chamber-lye. There are two kinds of Lice—the smaller sort are worst to kill. The larger may be killed by snuff, or white hellebore root in powder, or capsico berries in powder, all rubbed on dry, but staves acre is the best for either sort of Lice.

The Cow slip the Calf.

When this grievance spreads among a number of cows it is very troublesome; for, besides the loss the owner is kept in continual anxiety of mind. When you see a cow likely to part with her calf, separate her from the rest as soon as you can, if you have convenience; and as soon as she has parted with it give the cleansing drink; for this is an infectious disorder, and most of the infection is conveyed by the smell; and the longer the cleaning is in coming away the more the air is infected, and more the contagion spreads—sometimes over a whole neighborhood. I

advise you to put tar upon the noses of your cattle when this disorder prevails, and burn dried Asfœtida or Wormwood, or to sprinkle Spirits of Tar, or anything to make a strong smell about the cow house. If you have got any fresh cattle they will soon take the disorder. In order to help to remove the infection, give the drink prescribed for cleaning a cow after calving, and repeat as often as needful. The times when a cow is most likely to part with her calf are eighteen, twelve, nine and six weeks from her regular time of calving. Give the drink at each of these times, except the nine weeks, and bleed at the same time.

Lameness.

When a beast has been a long time lame the claws grow long, and are very troublesome to it; so I advise you to cut them. Take a block of wood, put the foot upon it and with a mallet and chisel strike off as much as you think needful.

Sometimes gravel works down into a beast's foot as it does in a horse's, and must be cured in the same manner. But a horse's foot and a cow's foot are made quite differently; for in a horse's foot the rims or shelves in the inside of the hoofs turn upward, which causes the gravel to go up and out at the top; but a cow's turn downward, and when the gravel gets in it stops there; so that a cow is much better to cure. Beasts are often lame in summer; sometimes it is caused by flies, and at others by riding another cow when in bulling, for they will come off on one side and leave the other on the cow's back, and either nearly tear the shoulder from the body or put it out of joint. When the shoulder is out of joint it stands off from the beast. Put a cord round the foot and draw it under the beast's belly, and if it comes down on the lame side, its weight will force the joint in again. If the lameness be in the cap bone or the udder joint, you must ascertain whether the cap be shifted in the stifle joint or not. Some-

times the tendon is thrown on one side. When lameness is caused by any of these accidents, the part must be put right before you can expect a cure. Rub any part that is disordered with the following: Oil of Orignum, Spirits of Turpentine, Spirits of Sal-Ammoniac, Oil of Amber, one ounce each; to be mixed in two ounces of Sweet Oil, or Castor Oil. This mixture is what is called the Strong Oil.— There is another kind of Oil commonly called the Horse-Bottle, which is made of the following: Oil of Orignum, one ounce, Oil of Turpentine, one ounce, Oil of Swallows, one ounce, Oil of Worms, one ounce, Oil of Spike, one ounce, Oil of Petre, one ounce, Spirits of Wine, four ounces, Opodildoe, one ounce. This mixture has been much esteemed in the west of Yorkshire, England. This recipe is worth all I get for this book. If you cannot get the Oil of Swallows use Oil of Castor, which will do as well.

Inflammation of the Womb.

This is an inflammation of the uterus or womb, which attacks cows a few days after calving or after abortion. This disease commences with the same symptoms which attend most inflammatory diseases, a chill followed with rapid breathing, high pulse, redness of the nostrils, and cold legs. The symptoms which will enable the observer to tell that it is a case of Inflammation of the Womb, are the time at which it occurs, the tenderness and hardness which can be felt at the back part of the loins, and the free sweating there. When up, the cow stands with her hind legs wide apart, but she lies down most of the time. The bearing will be swelled, and on opening it, the vagina, or passage to the womb, will be very red and hot. It may be caused by severe labor, taking cold after calving, or membranes which envelop the calf, not coming away. Cows in good condition are most liable to it.

The treatment for this disease must be prompt

and vigorous, or it can be of little value. Bleed from the neck vein largely. Then take Tartar Emetic, sixty grains; Sweet Spirits of Nitre, one ounce; Tincture of Digitalis, one ounce; Tincture of Opium, one ounce. Mix in one pint of warm water as a drench. After two hours give the same, leaving out the digitalis, and so on until the inflammation is subdued. Then give sixty grains of Carbonate of Ammonia every two hours, in warm water, until the strength and health be restored. Rub the legs with one pint of Alcohol and one ounce of Cayenne Pepper, shaken up well before using.

MEDICINES.

I herewith give recipes for medicines for nearly every disease to which the horse is liable. Many of these medicines are composed of articles always on hand in the farmer's house, or easily obtained, so that if a horse is taken suddenly sick, a safe medicine may be selected and given, without subjecting the animal to the torture of the many ignorant fellows who are always ready to throw dose after dose down him. I have known articles given a sick horse, when the very first one given would have been sufficient to badly injure or kill the animal.

Medicines for cows you will find connected with each disease—what to give, when to give, and the benefit received. You will also find the same with the sick horse and his disease. However, I will give a few more recipes for external and internal diseases of horses.

Anti-Spasmodic Mixture for Flatulent Colic.—Oil of Turpentine, two ounces; cold water gruel, one pint. Mix for one dose.

Remark.—To an inexperienced person this might appear a very formidable remedy, but it is not only very safe, but seldom fails of giving relief. Many practitioners give it in larger doses; indeed, I have often known four ounces to be given at a dose, with the best effect.

2. Camphor, one and one-half drachms; Ether, 6 drachms; Essence of Peppermint, from one to two drachms; water.

one pint. Mix for one dose. Essence of Peppermint is made by dissolving one part Oil of Peppermint in five of rectified spirits. The bottle must be well shaken, in order to mix the Ether with the other ingredients, and the Camphor should be first dissolved in the Essence of Peppermint.

3. Tincture of Opium, one ounce; Oil of Juniper, two drachms; Sweet Spirits of Nitre, one ounce; water, one pint. Mix for one dose.

4. Opium, one drachm; Camphor, $1\frac{1}{2}$ drachms; Ginger, powdered, two drachms; Castile Soap, three drachms. To be made into a pill with molasses for one dose.

Remark.—The Flatulent or Spasmodic Colic must be carefully distinguished from the Inflammatory, and from that which depends upon costiveness. It is always necessary to empty the bowels by means of clysters; and should the horse have appeared dull and heavy previous to the attack, it would be advisable to bleed. If costiveness attends it, give a laxative drench after the paroxysm, which will prevent its return. Those who travel with crib biting horses, or one that is often attacked with this complaint, should always have a remedy at hand, for which purpose No. 4 is recommended. It may be easily dissolved in strong beer or peppermint water, or any spirits, and given as a drench.

Anti-Spasmodic Mixture for Old or Chronic Cough—Asaetida, $\frac{1}{2}$ ounce; Squills, powdered, one drachm; Castile Soap and Venice of Turpentine, each two drachms; Balsam of Peru, enough to form the pill. Mix for one dose.

2. Powdered Squills and Camphor, of each one drachm; Powdered Opium, $\frac{1}{2}$ drachm; Castile Soap, two drachms; Strained Storax, one and one-half drachms. To be made into a pill with molasses for one dose.

3. Powdered Foxglove, $\frac{1}{2}$ drachm; Extract of Hemlock, two drachms. Mix for one dose.

Remark.—I have generally found the above recipes more efficacious when preceded by a laxative pill or a course of the laxative alteratives, which are to be given every morning until the desired effect is produced. Coughs which arise from irritation about the throat are distinguished by their almost constantly harassing the animal; and these are often relieved by emollient drinks and the following:

4. Opium, one drachm; Castile Soap, two drachms; Camphor, one and one-half drachms; Oil of Anise seed, twenty drops. To be made into a pill with molasses for one dose.

Most of the medicines I have here recommended for Chronic Coughs possess a diuretic quality, and it is probable that their good effect may arise from this.

Astringent Pill for Diabetes.—Opium one drachm, Powdered Ginger two drachms, Powdered Oak Bark one ounce. To be given in a pint of Oak Bark Decoction.

Astringent for Diarrhœa.—Opium one drachm, Ginger one and one-half drachms, Prepared Chalk six drachms. Mix into a pill with Honey or Molasses, for one dose. A teaspoonful of Ginger is a drachm.

2. Powdered Rhubarb one ounce, Prepared Natron two drachms, Cassia, powdered, one and one-half drachms, Oil of Mint twenty drops. To be mixed as above for one dose.

Remark.—I have often seen mischief done by giving astringents in diarrhœa too hastily, and think it advisable in general to give in the first place a laxative.

Laxative Alteratives.—Barbadoes Aloes ten drachms, Castile Soap one ounce, Anis seed, powdered, one and one-half ounces, Oil of Cloves twenty drops, Molasses enough to form the mass into four pills; one to be given every morning until the bowels are moderately open.

Alteratives are Medicines that gradually change the system from a diseased to a healthy state. The medicines commonly used as alteratives are given in very small doses, so that their effect is scarcely perceptible; nor do they prevent a horse from continuing his usual work, or render it necessary to make any alteration in his diet. In the *Materia Medica* I endeavored to show the propriety of dividing Alteratives into three classes, viz: Laxative, Diuretic and Diaphoretic, which plan we shall follow.

2. Flour of Sulphur six ounces, Tartarized Antimony six drachms. Mix for six doses. This may be given in the form of powder, daily. But few horses will refuse it in their feed, which should be previously moistened.

3. Liver of Antimony three ounces, Cream of Tartar four ounces. Mix for six doses. One to be given daily, or until the bowels are opened.

Remark.—You may understand that this is a better Condition Powder than you can get at the stores.

Condition Powders.—Take Ginger, four ounces; Black Antimony, two ounces; Sulphur, two ounces; Saltpetre, two ounces; Resin, two ounces. Mix, and give one teaspoonful in the feed three times a day.

2. Take Bloodroot, Yellowroot, Black Antimony, Saltpetre, each two ounces. Mix, and give one teaspoonful in the feed twice a day.

3. Take Anis seeds, Ginger, Liquorice powdered, Caraway seeds, one ounce each. Mix, and give one ounce of this mixture every morning in the horse's feed fasting. If a large horse increase the quantities of each, and give one and one half ounces for a dose.

Fever Pills, or Inflammation on the Lungs.—Camphor, one and one-half drachms; Saltpetre, four drachms; Calomel and Opium, each twenty grains. Mix with molasses.

2. Camphor two drachms, Saltpeter one ounce. Mix for

one dose. The above pills to be given every day or oftener if the symptoms require it. It is proper to observe here that no medicine will avail much in fever, if bleeding is neglected. Under the head of Colic you will find in what diseases to bleed, and when it is proper. I have written more on Colic than on any other disease. This complaint I have found must have immediate help or the horse soon dies.

Embrocation for Callous Swellings or Bog Spavins, Wind-Galls, Enlarged Joints, &c.—Strong Mercurial Ointment two ounces, Camphor half an ounce, Oil of Rosemary, half an ounce, Spirits of Turpentine one ounce. Mix.

Blistering Embrocation.—Strong Mercurial Ointment two ounces, Oil of Bay, one ounce, Oil of Origanum half an ounce, Powdered Spanish Flies half an ounce.

Golden Ointment.—Nitrous Acid, two ounces; Quicksilver, one ounce. Place them in an open bottle or vessel, taking care to avoid the noxious fumes which arise. When the quicksilver is perfectly dissolved and the mixture cold, take one pound of hog's lard, melt it before the fire and turn it into a quart bottle, and stir it with the acid. It is good for spavins, ringbones, curbs, etc., and will cure them in the first stage.

Adhesive Plaster.—Burgundy Pitch, four ounces; Barbadoes Tar, six ounces; Beeswax, two ounces; Red Lead, four ounces. The three first are to be melted together, and the latter added. Stir constantly until sufficiently cold.

Recipe for Opodeldoc.—Castile Soap, five ounces; Oil of Rosemary, six drachms; Gum Camphor, ten drachms; Alcohol, two quarts. Let it stand eight days, shaking it up every day. I would prefer making my own in preference to buying it. It is a popular remedy for strains and bruises, and lameness of any kind, especially if you take Turpentine, two ounces; Opodeldoc, two ounces; Sweet Oil, two ounces. Mix.

Sweeny Liniment.—Take Oil of Spike, Oil of Origanum, Aqua Ammonia, Spirits of Turpentine, Sweet Oil, Alcohol, each two ounces. Mix. This is to be applied to the parts shrunk, and well rubbed in every other day. Four applications will cure it.

Tincture of Myrrh is made as follows: Gum Myrrh, two ounces; Aloes, one ounce; Alcohol, one quart. This mixture will cure green wounds the quickest of any medicine that I have ever seen.



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